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ABSTRACT

Factors affecting access to postsecondary education for college-age youth were studied, with emphasis on personal characteristics and institutional policies that influence educational aspirations and postsecondary enrollments. Data were primarily derived from two databases: the High School and Beyond Study and the National Longitudinal Study of the High School Class of 1972. Using data from 1980 and 1972, high school seniors' educational expectations were examined to determine the influence on attendance of their racial/ethnic background, gender, socioeconomic status, family income, academic performance, and geographic location. The types of colleges selected by students and students' personal characteristics were compared, and factors influencing full-time and part-time attendance and academic fields chosen by students were assessed. Student use of four sources of financing was reported: grants (including scholarships), loans, assistance from relatives, and their own funds. Data for specific aid programs are included. (SW)

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Transition from High School to Postsecondary Education: Analytical Studies

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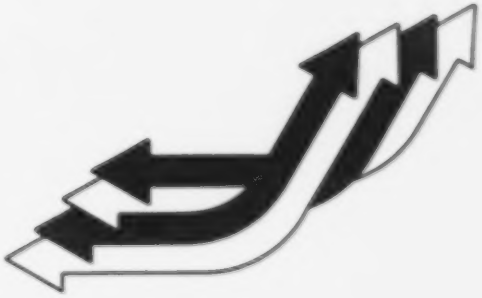

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Transition from High School to Postsecondary Education: Analytical Studies

National Center for Research in Vocational Education
Ohio State University Research Foundation
Columbus, Ohio

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EXECUTIVE SUMMARY

This study focuses on the factors affecting access to postsecondary education for college-age people. Primary emphasis is given to identifying those aspects of personal background and institutional policy that influence educational aspirations and enrollment in postsecondary programs. Also examined are the relative influences of family income and of the availability of financial aid on decisions to attend, and on access to postsecondary education. The relative frequencies of use and dollar amounts expended by various financial aid programs are also considered. The results of the project are primarily derived from comparisons of data taken from two databases--the High School and Beyond (HS&B) Study, initiated in 1980, and the National Longitudinal Study of the High School Class of 1972 (NLS '72), funded and supervised by the Center for Education Statistics (CES).

This research has been guided by postsecondary education policy issues. First, the public perception of a decline in the quality of American education, which has been reinforced by recent reports, warrants examination. The role education plays in promoting economic growth and helping the nation meet economic challenges has also become a subject of increasing concern. Due to recent changes in government financial aid programs it is also important to identify which groups rely most heavily on financing and would therefore be most severely affected. Fourth, equality of postsecondary educational opportunity is an issue. Information on the relationship of attendance with such factors as race/ethnicity, gender, socioeconomic status, academic aptitude, and region of the country informs policy in this area.

Of major importance is the impact of several trends: a general increase in college costs; a decline in student enrollments, reflecting the decline in the college age population; and a decline in the rate of financial return to a college education. These trends threaten to alter the basic character of postsecondary education and to create tension between the public and private sectors of postsecondary education. Finally, the extent to which 2-year schools are preparing students to transfer to 4-year institutions to complete bachelor-level studies is of concern.

This study addresses these concerns by examining educational aspirations, expectations, and plans; rates of postsecondary attendance and the degree to which attendance matches plans; the characteristics of institutions and programs selected; and methods of financing postsecondary schooling. The study is informed by four major theoretical perspectives on educational attainment: human capital, status attainment, dual labor market, and educational credentialling. Previous research on postsecondary decisions offers insight into which factors suggested by these theories may be most deserving of study. The factors emphasized in this project are those that affect prospective students' access to postsecondary education. These include significant others (family socioeconomic status, parental aspirations, and peer choices); parental income; scholastic achievement and ability; gender; race/ethnicity; region of the country; high school curriculum; financial aid; explicit and implicit costs of postsecondary education to students; and postsecondary school quality.

Presented next, under four major categories--educational expectations, postsecondary attendance, school and program selection, and sources of financing--are some of the more important and interesting findings of this project. In surveying these findings, though, consideration must be given to the fact that samples were drawn from two databases, to the operational definitions of factors and terms examined, and to the research techniques used in the study. These elements are fully discussed in the body of the report.

Educational Expectations

- The overall level of education that high school seniors expect to attain has not changed much over the past decade.
- In contrast to previous findings, females' educational aspirations, at least in 1980, were higher than males'.
- Higher academic achievers, students from high SES families, and students from families with higher incomes were more likely to aspire to at least the bachelor's degree, and less likely to expect only high school graduation.
- Vocational and general curriculum high school students were more likely than academic curriculum students to expect only high school graduation, and more likely to attend trade school.
- Those seniors who expected at least a bachelor's degree preferred to attend 4-year colleges, rather than junior colleges. Blacks are much less likely than Hispanics and slightly less likely than whites of the same gender to expect only high school graduation.
- Both black males and black females prefer 4-year institutions more often than either whites or Hispanics.
- In general, black students are somewhat less likely to report close agreement between their own expectations and those of their parents.
- Surprisingly, aspirants to high school graduation place neither more nor less emphasis on job security than aspirants to graduate degrees.
- Decisions to attend are made early by those who intend to attend college but are postponed or avoided by those who eventually expect less than a 4-year degree.
- Hispanic males and females were more likely in 1980 than they were in 1972 to expect only high school graduation.

Postsecondary Attendance

- Rates of attendance or enrollment immediately following high school graduation have fallen over the last decade.
- Due to shifts in enrollment, the majority of those postsecondary students who have recently graduated from high school are now females.
- Overall, whites are most likely and Hispanics least likely to attend some form of postsecondary school.
- Hispanics are substantially less likely than either blacks or whites to apply to postsecondary schools.
- Attendance seems to be more sensitive to academic performance than to social status of the family; thus, superior academic performance does permit students from low SES backgrounds to attain access to postsecondary education.
- Higher aptitude students are more likely now than in the early 1970s to continue their postsecondary education beyond the first year.
- Socioeconomic status has a stronger impact on attendance of whites or Hispanics of either gender than on blacks.
- As is generally believed, academic curriculum students are far more likely than general curriculum students to attend postsecondary institutions; general curriculum students in turn, are more likely to attend than vocational students.
- Those who show an orientation toward practical work, and a strong concern for either monetary or nonmonetary aspects of work, are less likely than others to pursue postsecondary education.

School and Program Selection

- Although all students are more likely to attend public institutions than private ones, whites are relatively more likely than others to attend private universities.
- Hispanics are more likely than blacks or whites to attend 2-year institutions.
- Rates of enrollment among Hispanics were lower for all types of institutions in the early 1980s than in the previous decade.

- Postsecondary vocational schools are more likely to draw students from the lower ranges of SES and academic performance.

- For most prospective students, academic characteristics are more important in selecting a postsecondary school than are financial demands, social opportunities or proximity of the school to one's home.

- Four-year colleges or universities are attended more frequently than junior colleges, which in turn are attended more frequently than vocational/technical schools.

- As aptitude scores or family SES scores increase, students are much more likely to take academic courses at colleges or universities in accord with the plans they expressed as seniors.

- For most aspiration levels, whites are more likely than blacks or Hispanics to act consistently with the aspirations they expressed as seniors.

School and Program Selection

- Scholarships and grants and loans are used more often by students of higher ability than by those of low ability.

- Families with middle incomes are more likely to use loans than are those from other income categories.

- Blacks of either gender are heavily dependent on financial aid to attend postsecondary schools; Hispanics less so; and whites less still.

- Students attending 4-year institutions, either public or private, are more likely than others to use their own funds; those attending private schools are more likely to use some form of aid (grant or scholarship).

- As expected, Pell grants, the most frequently used source of aid, are used more often by blacks, students from low income families, and low academic aptitude students.

- College- or university-based aid, second to Pell grants in frequency of use, is used more often by white males and white females.

- Low aptitude students and students from families with low incomes are less likely to receive college-based aid.

- Federally Guaranteed Student Loans (GSL), the most frequently used loan program, are used more often at 4-year private schools, by whites, and by high income families.

- National Direct Student Loans (NDSL), campus-based, are the second most frequently used type of loan; white males and white females are least likely to use NDSLs.

- Regular bank loans, State loans, and loans from parents or relatives exhibit no clear pattern of use by income, academic ability, or race/gender.

Conclusions

As mentioned previously, this research addresses the broad concerns related to equity in access to postsecondary education (which includes the availability of financing); the pursuit of educational excellence at the postsecondary level; and projected shifts in both the scale and distribution of postsecondary enrollment. To summarize the results reported here and draw conclusions for policy, an overview of findings for a single subgroup of the research--the high aptitude students--is appropriate. In addition, a review of the results as they relate to these broad concerns will be helpful in indicating what they contribute to the understanding and eventual resolution of policy issues.

The HS&B data show that students from the high aptitude quartile are more likely to aspire to a 4-year college degree and expect to pursue graduate education. They are also more likely to increase their level of educational expectations during the first 2 years following high school graduation. Moreover, these high aptitude students not only profess high aspirations, but actually attend postsecondary schools more often and are relatively more successful in fulfilling their plans for postsecondary education. This higher attendance rate for these students is found among both males and females, among the racial/ethnic groups studied, at all income levels, and at all socioeconomic levels. In addition, higher aptitude high school students are more likely than other students to pursue the more challenging subject areas in their postsecondary education, such as science, health, engineering, and computer science. These findings should be relatively encouraging to those who expect colleges to offer the education necessary to help the country compete with the rest of the world.

In financing their postsecondary education, these high aptitude students are more likely to use a wider variety of sources, such as loans, grants, or scholarships, their own earnings or savings, and aid from friends or relatives. Thus this group does not rely heavily on Federal sources of aid and is likely to be less affected than other groups by changes in Federal student aid programs.

The second focus of this conclusion is the three main areas of policy concern: equity in access to postsecondary education, postsecondary academic excellence, and shifts in enrollment. Regarding equity in access, the analyses reported here are consistent with the position that a substantial degree of equity in access to the American postsecondary educational system exists. Findings indicate that higher aptitude, SES, and family income are

all associated with a greater likelihood of postsecondary attendance. Aptitude produces the greater (albeit slight) likelihood when SES and family income are controlled. Thus differences in access by academic ability or aptitude carry a presumption of equity, since one expects students with higher aptitude to be able, on average, to benefit more from a postsecondary education.

Equity in access by gender seems to be solidly supported by the finding that females have become the majority of recent high school graduates attending postsecondary schools. This has come about because their initial enrollment rate has not changed over the last decade while that of males has fallen, and because their continuing enrollment rate has increased while the rate for males has held steady over the decade. In terms of overall attendance, aspirations, recent trends in attendance, and types of institutions attended, females' attendance patterns show that they are not subject to substantial disadvantages in access.

Access by race/ethnicity also exhibits a mixed pattern of equity. There is evidence that race/ethnicity does not influence postsecondary attendance when academic performance is controlled. However, in aspiration, applications to schools, and attendance; in the match of actions with plans for education; and in the ways in which educational expenses are financed there remain differences among groups. For example, there appear to be clear problems in fulfilling plans for postsecondary education at any level among those students with low academic performance and those from low SES backgrounds. In addition, specific types of financing are used in different proportions by various racial/ethnic groups, revealing the vulnerabilities of the various groups to changes in the structure of Federal or State programs. For instance, blacks, Hispanics, and students from low-income families are heavily dependent on Federal sources of aid (Pell grants and NDSL). Students from higher income families and white students use sources that include the Federal Government but go beyond it: school aid, aid from private organizations, and GSL. Thus Federal aid programs help reduce financial burdens for the disadvantaged, but also expose those groups to financial hardship should aid programs be cut.

With regard to postsecondary academic excellence, two issues are of special concern: whether the brightest students today are attending postsecondary schools and whether academic standards have been lowered to such an extent that lower aptitude students constitute a larger fraction of the student body than they did 10 years ago. Evidence in this study is available to support both the relatively optimistic and the relatively pessimistic views of trends in academic quality.

One positive trend is that enrollment by the highest aptitude students has not dropped over the last decade. Even though high SES students are enrolling less often now than a decade ago, the numbers of high aptitude students staying are about the same.

Last, the findings have implications concerning the effect of shifts in enrollment on the character of postsecondary education.

Increased rates of attendance among females are not large enough to offset reduced attendance rates among males. In addition, enrollment rates for Hispanics are declining and are accompanied by reductions in this groups average level of educational expectations. Thus the recruitment problem for postsecondary institutions is an acute one.

Since the projected declines in population are concentrated among white students, and since this study confirms the dominance of whites in enrollment at private institutions, it may be that private institutions will experience greater adverse impacts than public institutions. Moreover, enrollment is declining among high SES students and among low aptitude students; thus the less selective institutions, especially private ones, will face greater declines in their potential enrollment pool than would be suggested by overall demographic trends alone.

The distribution of enrollments among types of schools is worth noting. Female enrollment rates are higher now than in 1972 in both 2-year and 4-year schools, but lower in vocational schools. Also, the fact that enrollment rates of high aptitude students have held level in the first year after high school graduation and have risen in the second year while rates for low aptitude students have fallen suggests that 2-year and vocational schools will be harder hit than 4-year institutions. The shift in aspirations toward education beyond the bachelor's degree may lead to more frequent enrollment in 4-year institutions.

The appendix contains the standard errors for the percents presented in the tables associated with the HS&B senior cohort. The standard errors are calculated using the balanced repeated replication method described in the section entitled "Analysis Methods" in Chapter 1. The percents found in the tables in the text represent estimates of the true percent of all high school seniors in the appropriate cohort. These estimates are subject to both sampling error and non-sampling error. Sampling error arises because a small number of individuals are selected from a population and are used to make inferences to, and draw conclusions about, the population. Estimates derived from one sample will differ from estimates derived from another sample drawn from the same population in the same way. These differences are the result of sampling variability.

Differences among estimates of populations may exist because of both sampling and non-sampling errors or because the population proportion are indeed different. Standard errors are utilized to make probabilistic statements about differences in population parameters.

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CHAPTER 1
INTRODUCTION

The High School and Beyond (HS&B) study and the National Longitudinal Study of the High School Class of 1972 (NLS '72), offer unique opportunities. Both were funded and supervised by the Center for Education Statistics (CES). They provide a unique combination of extensive comparable data on personal characteristics, educational and labor market experiences, selected at two widely separated times and bearing on important issues in educational policy. Current educational policy is being widely debated, and important changes in programs that foster postsecondary access are being considered. The HS&B and NLS '72 data sets provide the best data available for analyzing some of the issues that will influence the debate and the policy changes likely to emerge from it. This study provides information on what factors influenced shifts in postsecondary enrollment patterns and what effect existing policy had in promoting or retarding those shifts.

These data can be used to serve two objectives:

- Identify personal background characteristics and experiences and institutional policies and characteristics that influence expectations for and enrollment in higher education.

- Describe the relative contributions of various financing sources to access to postsecondary education.

This project uses the HS&B and NLS '72 data to provide information on the personal, institutional, and policy-related factors that influence access to postsecondary education and that combine to produce those shifts in enrollment patterns. For both 1972 and 1980, the important influences on access are inferred from the data. The report examines influences which were important earlier but do not seem to be important more recently, identifies influences that seem to be important now but were not important in 1972, and combines these findings with other sources of information about demographic trends and the amounts and types of student aid available. Inferences are drawn about the respective impacts of policy, demographics, and the "autonomous" changes in social attitudes on access to postsecondary education for young people of traditional college age. The results are presented in carefully selected one-, two-, and three-dimensional tables.

Overview

CES' Longitudinal Studies Program[1]

The mandate of the Center for Education Statistics (CES) includes the responsibility to "collect and disseminate statistics and other data related to education in the United States" and to "conduct and publish reports on specific analyses of the meaning and significance of such statistics" (Education Amendments of 1974 - Public Law 93-380, Title V, Section 501), amending Part A of the General Education Provisions Act).

Consistent with this mandate and in response to the need for policy-relevant, time-series data on a nationally representative sample of high school students, CES instituted its long-term National Longitudinal Studies (NLS) program. The general aim of the NLS program is to study longitudinally the educational, vocational, and personal development of high school students and the personal, familial, social, institutional, and cultural factors that may affect that development.

The NLS program was planned to utilize time-series data in two ways: (1) each cohort is surveyed at regular intervals over a span of years, and (2) comparable data is obtained from successive cohorts, permitting studies of trends relevant to educational and career development and societal roles. The NLS program consists of two major studies: The National Longitudinal Study of the High School Class of 1972 (NLS '72) and High School and Beyond (HS&B).

The first, NLS '72, began with the collection of comprehensive Base Year data from over 22,000 high school seniors in the spring of 1972. Four Follow-Up surveys were conducted in the fall and winter for 1972, 1974, 1976, and 1979, using a combination of mail surveys and personal and telephone interviews.

The second, HS&B, was designed to inform Federal and State policy in the decade of the 1980s. HS&B began in 1980 with the collection of Base Year data on high schools seniors and sophomores. The First Follow-Up study was conducted in the spring of 1982, and the second was conducted in the spring of 1984.

History of High School and Beyond

Relation to NLS'72. High School and Beyond was designed to build on the NLS '72 in three ways. First, the Base Year of HS&B included a 1980 cohort of high school seniors that was directly comparable to the 1972 cohort. Replication of selected 1972 student questionnaire items and test items makes it possible to analyze changes that have occurred since 1972 and their relationship to recent Federal policies and programs in education. Second, the introduction of a sophomore cohort provides data on the many critical educational and vocational choices made between the sophomore and senior years in high school, permitting a fuller understanding of the secondary school experience and its impact on students. Finally, HS&B has expanded the NLS '72 focus by collecting data on a broader range of lifecycle factors, such as family-formation behavior, intellectual development, and social participation.

Brief description of Base Year. The Base Year survey was conducted in the spring of 1980. The study design included a highly stratified national probability sample of over 1,100 secondary schools as the first stage units of selection. In the second stage, 36 seniors and 36 sophomores were selected per school (in schools with fewer than 36 in either of these groups, all eligible students were included). Over 30,000 sophomores and 28,000 seniors enrolled in 1,015 public and private high schools across the country participated in the Base Year survey. (Detailed information about the samples can be found in Frankel et al. 1981.)

Several special strata were included in the sample with probabilities higher than their occurrence in the population to allow for study of certain types of schools or students. These included:

- Hispanic strata, with probabilities of selection to insure sufficient numbers of Cuban, Puerto Rican, and Mexican students for separate analyses
- a stratum of Catholic schools with high proportions of black students
- a stratum of public alternative schools
- a stratum of private schools with high-achieving students

The student questionnaires focused on individual and family background, high school experiences, work experiences, and plans for the future. Cognitive tests administered to students measured both verbal and quantitative abilities. In addition, sophomore tests included achievement measures in science, writing, and civics, while seniors were asked to respond to tests measuring abstract and nonverbal abilities. Of the 194 test items administered to the HS&B senior cohort in the Base Year, 86 percent were identical to those given to the NLS '72 Base Year respondents. A supplementary parent questionnaire elicited information about how family attitudes and financial planning effect postsecondary educational goals.

Overview of first Follow-Up Design

Sample design. The First Follow-Up sample consists of approximately 30,000 1980 sophomores and 12,000 1980 seniors. It retains the multistage, stratified, and clustered design of the Base Year sample. All students selected during the Base Year (including nonrespondents) had a probability of inclusion in the First Follow-Up. Unequal probabilities were compensated by weighting. NORC attempted to survey all 1980 sophomores (includ ing Base Year nonrespondents) who were still enrolled in their original Base Year schools. Certain categories of 1980 sopho mores no longer enrolled in their original schools were subsampled and certain categories were sampled with certainty. A subsample of 11,500 students was selected from among the senior cohort Base Year participants. This subsampling was carried out so as to ensure the analytic power to address policy issues in areas such as excellence in education, access to postsecondary education, need for financial aid, and the impact of education on career choices. Further information on the sampling procedures, data collection, and survey administration may be found in Jones et al. 1983.

Policy Issues

Access to postsecondary education is always of great concern. State and local policymakers are concerned because substantial fractions of their budgets are allocated to education. As David Brenemen (1978) has

noted, the Federal government concern is extensive, also: "Over 400 separate legislative provisions govern the flow of Federal dollars to postsecondary students and institutions, and virtually every Federal agency provides some form of support." The concern to economic and educational policymakers has intensified since the start of the "Excellence" movement.

Public perception of a decline in the quality of American education--primarily at the elementary and secondary levels, but also to some extent at the college level--has been reinforced and reemphasized by a flood of recent reports.[2] The most widely publicized of these was probably A Nation at Risk, the report of the President's National Commission on Excellence in Education. The shortcomings noted in that and other reports need not be restated here. The main points to be noted are the pressure that these reports have put on the educational establishment and on policymakers at all levels to improve educational programs and the increased level of public awareness of educational issues that these reports have created.

A principal reason for this concern about educational quality is the role education is perceived to have in helping the nation to meet the economic challenges posed by the decline of traditional American manufacturing industries and the growth of technologically more sophisticated industries. The concern is that too many students are not well-prepared for their post secondary education and that too frequently they study "soft" subjects at the postsecondary level. This report examines the extent of academic orientation of postsecondary students in 1980-81 compared to those in 1972-73. For example, it asks whether today's postsecondary students are less likely than they were a decade ago to come from among those students scoring above the median on tests of academic aptitude. The report also asks the data whether a smaller percentage of students now than in 1972-73 are studying technically-oriented or more academically-demanding course areas.

Cutbacks and restrictions on eligibility have caught the attention of prospective students and their families and of postsecondary school faculty and administrators. Pell grants had risen from $122 million in 1973 to $2.6 billion in 1981. Supplemental Educational Opportunity Grants (SEOG) had grown from $210 million in 1974 to $370 million in 1981. From 1973 to 1981 National Direct Student Loans (NDSL) had risen from $240 million in 1970-71 to $695 million in 1980-81 and Federally Insured (Guaranteed) Student Loans (GSL) commitments had risen by a factor of 6, from $1,015 million in 1970-71 to $6.2 billion (Gillespie and Carlson 1984). As Palmer and Sawhill have pointed out, the growth was very rapid recently. "Between FY1978 and FY1981 out lays in these programs (Pell grant and GSL) had increased by 114 percent, partially as a result of the extension of Pell grants to middle income students, the removal of any income restriction on eligibility for subsidized loans, and the rise in the implicit GSL subsidy when market interest rates soared in the early 1980s, making the loans more attractive. By FY1981 Federal spending on student aid (excluding the GI bill and Social Security) was $6 billion and accounted for nearly 80 percent of the tuition and fee income of all colleges and universities in the U.S. (compared with 39 percent in FY1976)" (1984, p. 374). The act that removed the income eligibility restrictions and stimulated greatly increased outlays was a response to what middle income families regarded as an increasingly inequitable situation, in which high costs combined with income restrictions on aid eligibility to make

financing educational expenses increasingly difficult in the late 1970s. Its name reflects that perception: Middle Income Student Assistance Act of 1978 (MISAA).

Original budget proposals would have cut student financial aid and loan subsidies by 44 percent between 1981 and 1983. Also proposed were cuts in Pell grants, elimination of the SEOG, NDSL and State student incentive grant programs, reduced subsidies for GSL, and exclusion of graduate and professional students from the GSL program. Actual cuts included the 4-year phase-out of Social Security educational benefits, reductions in the health professions training and nursing loans programs (Aaron et al. 1982, pp. 142-144), and reestablishment of some income eligibility and interest subsidy restraints. The prospect of further cuts in student financial aid continues to be an important issue. The data from HS&B and NLS '72 permit consideration of which groups in 1980-81 relied most heavily on each source of financing.

These changes in student financial aid have revived another issue. Much of this report is concerned with equality of postsecondary educational opportunity. Attendance rates by race/ethnicity, gender, parental income, socioeconomic status, academic aptitude, and region of the country inform the broad issues of equity in access. Figures showing the rates of use of various sources of financing for postsecondary education allow one to assess the extent to which Federal, State, and private sources of financing complement or duplicate each other and whether Government sources of assistance have served primarily to ameliorate or exacerbate differences in access.

Concurrently with this debate on student aid, the schools themselves have been extending aid with increasing frequency to students from middle and upper-middle income families. According to Delores Cross, president of the New York State Higher Education Services Corporation, this change represents a new direction in providing financial incentives to students. Colleges and universities are now providing help to groups that have traditionally provided the bulk of the college population (New York Times, November 12, 1983, pp. 1, 9). This report examines whether these reported shifts in private sources of aid have been significant enough to change the distribution of private and school-funded sources of aid among students with different levels of family income.

New proposals to expand the scope of Government aid programs and to modify their structure are being debated. The College Board estimates, for example, that proposals to allow $250 in tuition tax credits or to permit tax deductions of up to $2,000 per year for special savings accounts to finance educational expenses would cost the Treasury $2.5 billion per year in tax revenues. Another proposal to allow income from savings accounts for college expenses to be tax-free up to $1,000 per year would cost about $500 million, according to the College Board (Hauptman and Gladieux (1984). Clearly, the role and impact of Federal student aid is a leading issue in educational policy for the 1980s.

Researchers and policymakers have become aware of the confluence of three trends that threaten to alter fundamentally the character of post-secondary education and to create severe tension between the public and private sectors of postsecondary education. The first trend is related to the general increase in college costs that has already been noted. The relative costs to students of public and private institutions have changed over the last several years because the costs at private institutions have

been rising about 1 percent per year faster than costs for similar public institutions, at least since 1974-75 (CES, 1982b, p. 141). These differential rates of cost increase can be expected to have more severe impacts on private than on public institutions because the former draw a larger percentage of their revenues from students than do the latter. In 1980, the private universities obtained 36.1 percent of their revenues from students, compared to 25.1 percent for public universities. The ratio for non-university 4-year institutions showed an even greater contrast, with private and public institutions, respectively getting 58.0 percent and 22 percent of revenues from students (CES 1982a, p. 148).

The second trend is the projected decline in student enrollments based on the decline in population of traditional college age. The 18-24 year age group will decline from 29.5 million in 1981 to 23.2 million in 1995 (Breneman and Nelson 1980, p. 235). Overall declines in enrollment have not yet materialized. The effects of a possible decline have been magnified by the fact that the number of postsecondary institutions has continued to increase (CES 1982b, p. 114) and the rate of school closings has fallen since 1974-75 (CES 1983, p. 97). The decline has been averted in part by recruiting more nontraditional students and by placing students in programs that are more flexible and better-suited to their nontraditional needs. The increases in enrollments of blacks and females in recent years are in part a consequence of this strategy. So is the relatively rapid increase in enrollments in 2-year institutions, to the point that students in 4-year institutions in 1982 comprised only 61.7 percent of college students compared to 70.1 percent in 1972 (CES 1983, p. 80). A further indication is that full-time students were in 1982 only 58.3 percent of all students, compared to 65.9 percent that they comprised in 1972 (CES 1983, p. 80).

Emphasis on recruiting nontraditional students is expected to continue into the 1990s because the decline in the age group 18-24 occurs mainly among whites. Minority youth will increase from 14.2 percent to 19.3 percent of that age group by 1995 (Breneman and Nelson 1980, p. 235).

Increases in aid to middle income students reflect another strategy used by individual schools, which attempt to maintain both their enrollments and their academic standards as the population of students of traditional college age decline. This strategy results in intense competition for the best academic students among those of traditional college age.

The concerns for policy are twofold. First, in the competition to recruit the best students of traditional college age, resources that could be used to aid truly needy students may be redirected into a (privately advantageous but socially unproductive) bidding war. Second, in order to remain economically viable, schools may lower their standards for admission. That could reduce the value of a college degree and waste considerable time for students who will not benefit significantly from postsecondary education.

The third trend is closely related to this danger that college diplomas may lose some economic value. It threatens both public and private institutions, although the worsening relative price position of private institutions suggests that they may bear a disproportionate share of the impact. The trend is that of a decline in the rate of return to a college education. Despite the doubts of some observers that students plan their education rationally, a recent survey by the American Council

on Education suggests at least that student choices of fields are sensitive to their perceptions of job opportunities. Deans and other academic officials who were questioned in that survey noted, for example, a recent strong trend of students to select engineering and science programs because they expected those fields to have better job opportunities (New York Times, November 27, 1983, p. 11). To the extent that field offerings vary by type of institution, choices among institutions will also be affected by perceptions of job opportunities. Current preferences for scientific and technical fields probably bodes greater ill for private liberal arts institutions than for any other type. Moreover, this reasoning implies that the overall level of enrollment in postsecondary institutions may be sensitive to the perception of the rate of return to college diplomas, whatever the field. The most recent available data on this issue show that, after adjusting for inflation, the average annual salary of recent college graduates in 1981 was about 5 percent below that of 1978 (CES 1983). This finding suggest that the trend toward lower rates of return found by Freeman (1976) continues into the 1980s.

Several issues for public policy emerge from this conflict between the public and private sectors of the educational system and the likely differences in impact that current trends will have on these two sectors. McPherson (1978) discusses some of these problems in detail. He notes that whether the decline in traditional student population will have a more severe effect on private schools than on public institutions depends in part on the magnitude of the tuition gap between public and private institutions and in part on the sensitivity of enrollment choices to the size of the gap. The size of the gap depends, in turn, on decisions at all levels of government concerning tuition and aid availability.

Breneman and Nelson note that these demographic changes will provide the Federal government with an opportunity to influence the competition for students. They argue that the diversity of the American educational system is one of its great strengths and argues strongly against Federal intervention (1980, p. 242). But even if Federal policymakers attempt to remain neutral, Breneman and Nelson note, State and local policymakers will have many difficult decisions to make if the projected reductions in enrollment are realized. Community colleges may lose to 4-year schools students who in previous years would have attended the community college full-time and later transferred to 4-year schools. States must decide how to react to such shifts if they should occur (1980, p. 238). The HS&B data can show whether such shifts had begun by 1980-81.

Breneman and Nelson also point out other implications of the decline in enrollments. If State colleges find themselves with excess capacity, each State will have to decide whether to recruit out-of-state students more heavily than before. Also, States may be forced to revise their formulae for funding State institutions, since most of those rules depend heavily on enrollment. If private institutions are hurt too severely by these trends, States may have to consider whether to support troubled private institutions. States will also have to decide whether to increase the centralization of educational planning in the State. Such centralization is likely to have a detrimental impact on the State educational systems, according to Breneman and Nelson, because it will reduce autonomy and restrict innovation. The precise impact depends on the composition of enrollment, the public/private distribution of enrollment, the distribution between full- and part-time students, and the subjects

students elect to study (1980, pp. 238-242). This study can show the strength of any national trends in enrollment composition and analyze their relationship to personal characteristics of the students.

Although many other reasons could be stated for the immediacy of considering the data presented in this report, only one more will be noted here. Recent research raises serious doubts about the manner in which 2-year schools are serving one of their principal functions, to prepare students to transfer to 4-year institutions to complete bachelor-level studies. Several researchers have noted that even among students aspiring to 4-year degrees and even after correcting for differences in academic ability, students who start at 2-year colleges are less likely to eventually obtain a bachelor's degree than are those students who start at 4-year institutions (Anderson 1978, 1981; Breneman and Nelson 1981; Campbell, Gardner, and Winterstein 1984; Clowes and Levin 1980; Levin and Clowes 1980). If these researchers are correct, and if 4-year degrees are preferable to 2-year degrees (with or without some additional schooling), then recent trends toward more frequent enrollments in 2-year institutions may be unfortunate for national educational goals. This report considers the extent to which enrollment shifts toward 2-year institutions are taking place and among which groups of students.

Organization of the Report

Results are presented in four chapters that cover educational expectations, rates of enrollment, characteristics of institutions and programs selected, and methods of financing the expenses of students, with a final chapter addressing the conclusions, policy implications, and areas for further study. The present chapter describes the scope of the others and explains the selection of areas that are explored. It also describes the HS&B and NLS '72 data sets and the methods of analysis employed.

The second chapter focuses on educational expectations and plans. Expectations are usually expressed in terms of the level of education. Educational plans refer to the types of institutions people prefer or expect to attend and the intended timing of their attendance. The plans and expectations of high school seniors and sophomores in 1980 (HS&B) and 1972 (NLS '72) are examined and compared. The personal background characteristics and experiences that are associated with differences in plans and expectations are considered and compared. Plans and expectations are important to consider because they are a principal indicator of whether people will actually pursue postsecondary education.

Plans and expectations may be important indicators of social trends which educational policymakers must attempt to anticipate or to which they must react. If fewer males expect to pursue postsecondary education now than did a decade ago, the composition of the student body will change and the appropriate content of individual courses or the mix among courses may change significantly. Changes in aspirations over time among members of specific racial/ethnic groups may have profound implications for whether anticipated demographic changes in the composition of the traditional college-age population will have the projected impacts on enrollments. These enrollment impacts, in turn, will shape the struggle among public and private institutions, and among 4-year, 2-year, and vocational schools for a declining number of traditional college-age students. In addition, aspir-

aspirations and expectations are primary indicators of the perception of equity in educational access among females, members of minority racial/ethnic groups, or economically disadvantaged students. Substantial differences in that perception over time or among the groups at a particular time are important indicators of whether access is perceived to be equitable. Equally important is the comparison between plans and accomplishments as an indication of whether unrealistic expectations are being fostered among particular groups of people, with important long-term implications as expectations are consistently frustrated.

Also important in promoting the efficiency of the educational system is whether those students who are likely to benefit most from postsecondary education are also those most likely to expect or plan to pursue it. That relationship is examined in chapter 2. Also important in evaluating efficiency is the pattern of change in aspirations or expectations and whether those changes are more likely among students from certain backgrounds or with certain characteristics than among others. These patterns of changes are examined in chapter 2.

Chapter 3 asks the questions of who attended postsecondary schools and the degree to which attendance matched plans. It relates attendance patterns to background characteristics such as race, gender, socioeconomic status of the respondent's family, income of the family, region of residence, academic aptitude, and curriculum followed in high school. These tabulations provide the direct indication of whether differentials in rates of attendance among racial/ethnic groups, among students from different levels of socioeconomic status or with different family incomes, and between genders have widened or narrowed. They also show whether attendance rates overall have increased or decreased over the last decade. Because the tabulations are made for many of these background characteristics, one can judge whether the relationships between background factors and attendance have changed over time or whether observed changes in attendance patterns reflect changes in the distributions of background characteristics. The relationships among student ability, family income, and socioeconomic status are given special emphasis. Finally, the match between expectations and plans and actual attendance patterns is presented. Groups experiencing frustrations in achieving their plans are identified and the implications for equity are noted.

To the extent that aspirations match attendance, differences in attendance patterns among groups and changes between 1972 and 1980 within groups or in the relationships among groups show whether and to what extent projected changes in the composition of entering student classes are already occurring. As noted above, these projected changes have profound implications for the number, size and type of postsecondary institutions, and the structure of their programs.

These attendance patterns also have implications for other policy concerns noted earlier. Whether the brightest students are more likely now than they were a decade ago to attend 4-year institutions or whether they are more likely to attend lower-level institutions or not pursue postsecondary education at all carry important implications for those policymakers who are counting on the educational system to foster economic growth and to aid in meeting foreign economic competition. Also, whether middle income students are attending more or less often than others is an indication of whether any exceptional financial pressure on middle income families is adversely affecting the attendance rates of their children.

Chapter 4 examines several decisions made by those who attend postsecondary institutions. The types of schools (4-year, 2-year, or vocational, public or private, in-state or out-of-state) attended are compared with the background characteristics of the students who attend, in order to gain further insight into the degree to which equity extends to types of institutions attended and the influence of personal characteristics on the types of institutions attended. Such tabulations are especially important for judging whether and to what extent shifts in enrollment among types of institutions have already begun. They can also indicate the extent of enrollment in 2-year institutions by students who aspire to bachelor or higher level degrees and the race/gender patterns of such enrollments. These rates of attendance are relevant to assessing the scope of the problem of students who aspire to 4-year degrees who might be less likely to attain them because of attendance at 2-year institutions.

Chapter 5 presents the patterns of financing individuals' expenses for postsecondary education. Thirty financing sources are grouped into four categories (aid, loans, friends' or relatives' aid, and use of own savings or earnings). Tabulations are presented that show the relative frequencies with which these sources (both detailed and grouped) are used by students with various personal and background characteristics and the relative importance (measured as the fraction of expenses met through that category of aid) of each of the four categories to each race/gender, income, and aptitude group. Finally, tabulations show the frequency of use of aid by source for 4-year, 2-year, and voc-tech schools.

These tabulations in chapter 5 permit one to assess whether middle income families face relatively greater financing difficulties than their counterparts with higher or lower incomes. Greater burdens would be indicated by a heavier dependence on loans, friends' or relatives' aid, and own sources of financing. One can judge the extent to which aid from any specific source is allocated according to need or to academic performance. These distribution patterns have important implications for assessing the role of each source of aid in promoting equity in access or promoting access based on academic performance. One can judge the degree to which Federal sources of aid tend to complement (or to duplicate) patterns of aid offered by State governments, the schools themselves, and private sources. By comparing the distributions in 1980-81 with those in 1972-73 one can also get a sense of the relative impact of the major changes in aid programs over the past decade. One can also see the relative degree of reliance that various groups place on each source of aid (primarily as they existed before the most recent changes described earlier). (Student reports of use of specific sources of financing are likely to contain some errors. The discussion in chapter 5 describes the likely sources and nature of the errors more completely. It also compares self-reported frequencies to frequencies of use reported in other data sources.)

Analysis Methods

The approach to analysis in this study is straightforward. All data from the HS&B data set are presented in simple tables that show the relationship of the activity or attitude in question to the person's personal characteristics or circumstances. Where several factors interact, relationships are controlled in three-dimensional tables. The statistical

significance of differences between groups of people within HS&B are judged by standard t-tests. Because the sample is stratified, the distributions of respondents are weighted in order to make the weighted proportions representative of the population of 1980 high school seniors. The follow-up weights are used in all tables. The t-tests are complicated by the fact that the variance of a weighted proportion is a function of the variances within each of the strata in the sample. Estimating the true sampling variances using the strictly appropriate formulae for each of the comparisons one might want to make is a very tedious and exacting task.

The sampling variances can be approximated, however, by a technique known as balanced repeated replication (BRR). BRR uses subsamples within the larger sample, balanced according to the sample stratification design, to estimate the sampling variability of any proportions being calculated. The standard errors produced by the BRR calculations are then used in standard t-tests of the significance of the difference between two means or proportions. For each table in the text that uses data from HS&B, the appendix contains a corresponding table which shows the standard error estimated by BRR for each proportion that appears in the text table. Readers can make their own checks of significance as they wish in examining the data in any table by turning to the appropriate table of standard errors in the appendix. Although the results of such significance tests are not shown explicitly in the text, only differences that are statistically significant at the .05 level (alpha error) are discussed unless the text specifically notes otherwise.

Comparisons over time, usually between HS&B and NLS '72, are complicated by practical limitations on this project. In most cases, results drawn from NLS '72 are taken from other published work. Complete information on the variability of proportions or means is not available in most of these other references. Formal tests of differences are often not possible, therefore, when comparing the 1972-73 period to the 1980-81 period.

Variable Descriptions

Most concepts and their counterparts as defined in the data are discussed in the chapters in which they first appear. How ever, several variables are used consistently across all chapters, and their specifications are discussed here.

Only three racial/ethnic groups are discussed in these data: whites, blacks, and Hispanics. American Indians, Alaskan Natives, Asian or Pacific Islanders, and those of "Other" racial/ethnic origins are omitted from the tables because there were simply too few of them in each group to permit one to estimate their patterns of behavior with much confidence. In the analyses of the HS&B data these other racial/ethnic groups have not been combined with whites, but many of the other studies that are drawn upon here for comparisons are not explicit regarding their treatment of these minority respondents.

The classification into these racial/ethnic groups was made by NORC under contract from CES from more detailed responses to survey questions asking the racial and ethnic heritage of the respondents. For further details, see Jones et al. 1983, p. 61.

Socioeconomic status (SES) combines several attributes of the student's parents and home learning environment, as measured in the Base Year (1980) questionnaire. It thus precedes any postsecondary experiences the student may have. The level of education and the occupation of each parent (as reported by the student) are considered, as are family income and the student's responses to a series of questions concerning the learning environment in the home and the possession of certain consumer durable goods. The grouping of respondents into quartiles along with SES scale was used here as it was calculated by NORC from base year data. For a more complete description of the scale, see HS&B 1980 and Jones et al. 1983, pp. 62-64. The SES scale used in most studies involving the NLS '72 data is similar to that for HS&B but it differs in some details, and the two middle quartiles were combined in the composite categorical variable that most researchers found convenient to use. Thus, comparisons lose some detail because of the lesser detail available for NLS '72. For a description of the SES scale for NLS '72 see Riccobono et al. 1981.

What is referred to later as a measure of academic aptitude is a composite score calculated from reading, vocabulary, and mathematics tests administered to most respondents during their senior year in high school. The details of the calculations are given in Jones et al. 1983, p. 62. Although this measure is described as an aptitude composite, it is necessarily a product of academic aptitude or ability and academic performance or achievement. These four terms are thus used interchangeably in the following chapters to refer to this particular variable. The terms, of course, refer to different but often closely related concepts. It is recognized that the variable is not as strictly a measure of performance or achievement as would be class rank or high school grades, but the authors regarded it as a better measure of aptitude than either class rank or grades.

The measure of family income used here combines information from two sources. The parents of a subsample of the HS&B students were interviewed. Among the information solicited from them was that concerning their income. The family income measure used in the analyses that follow was drawn from the parent responses when available. Otherwise, the student's response to a survey question was used. That question identified seven ranges of income and asked the students to choose that range in which their own family's income fell. Parental responses were converted from continuous data into categorical data to match the ranges in the student question. When neither parent nor student reported income, no attempt was made to use SES or parental occupations to impute income levels to the family. Instead, the income variable was given a code indicating that the data were missing, and the observation was dropped from tables involving income.

Response Rates

The information on high school seniors of the class of 1972 is primarily from secondary sources. For this reason response rates associated with the analyses of this cohort will not be discussed. The major focus of this study, however, is on the 1980 cohort of high school seniors. Both base year and first follow-up data on this cohort area used in this report. For the primary sampling unit, the high school, 1,122 high schools were selected to participate and an additional 204 high schools were selected to substitute for over which refused to participate.

Of the 34,981 high school seniors drawn from the 1,015 participating schools in the base year sample, 28,240 completed the questionnaire for an 81% response rate. For the first follow-up 11,995 of the base year seniors were drawn for the first follow-up sample and 11,227 or 94% completed the first follow-up questionnaire.

On a variable basis the classification or control variables of race/ethnicity, sex, and region of the country had the lowest non-response rates, zero. High school program and SES were next lowest with item non-response rates of less than three percent. The non-response rate for the test quartile variable was next with an item non-response rate of ten percent. The last classification variable used in the analysis is family income. As discussed above it is a constructed variable in which data reported by parents were used first and student reported data second.

Response rates for the dependent variables in the student generally range from one-half of one percent to three percent. Financial items requiring the survey member to recall both the amount and the type of the financial item (cost or resource) generally had larger non-response rates, ranging from two to eight percent.

Theoretical Framework

Three broad categories of postsecondary institutions are identified here: vocational schools, 2-year colleges, and 4-year colleges or universities. For the sake of the readability of this report, several terms are used interchangeably for each category. Thus, "2-year institutions", "2-year colleges", "junior colleges", and "community colleges" are used to refer to the same group of institutions. This practice is followed de spite the facts that some postsecondary vocational schools have 2-year (or longer) programs and that not all community colleges are exactly like all junior colleges. Similarly, the terms "4-year college", "university", and "4-year institution" are used synonymously, despite the obvious areas where those terms do not overlap, strictly speaking. Where a distinction is important, as in discussing the implications for 4-year, private, liberal-arts colleges of shifting enrollment patterns, the distinction is explicitly noted.

Using HS&B data requires limiting the range of factors that are considered from among all those that are possible influences on postsecondary access. Guidance on this selection is offered by four major theoretical perspectives on educational attainment and a review of work spawned by those theories.

The human capital approach of economics and the status attainment approach of sociology complement each other on this topic. A substantial body of literature from the status attainment perspective finds that aspirations and educational attainment are closely related and considers the factors that influence both. The human capital approach considers the labor market and financial aspects of schooling decisions, while treating preferences and aspirations as given. The limitations of these approaches have spawned alternative views, two of which are discussed here, the dual-labor market approach and a view which, for lack of a generally accepted term, is referred to here as educational credentialling. A brief summary of each approach provides the basis for selecting variables that are expected to affect access. A review of empirical studies shows which of these factors receive support in data for their association with attendance.

Status Attainment

The basic idea in the status-attainment model[3] (see Haller (1982) and Colclough and Horan (1983) for recent reviews) is that career statuses such as education, occupation, and income are passed from generation to generation by a sequence of inter personal processes termed "significant other influence." The influence of significant others (parents, other adults, and peers) helps to shape career plans of youth, and those plans affect educational and occupational attainments.

The basic theoretical viewpoint of the model is that parental status affects occupational status of offspring through the following path: from parents to significant others to career plans to schooling to occupational achievement. Additionally, mental ability and school grades influence occupational achievement through a similar sequence of steps.

This relatively simple model has stimulated an enormous amount of research. Sewell and his associates have presented numerous tests of the Wisconsin Model of status attainment and have advocated several refinements of the original version. (Sewell, Haller, and Portes 1970; Sewell, Haller, and Ohlendorf 1969). In seminal research on the Wisconsin data, an index of significant others' attitudes was constructed from parental encouragement to attend college, teacher's encouragement to attend college, and peer plans to attend college, all as perceived by the respondent. This composite variable was found to account for well over half of the indirect effects of parental status on educational and occupational expectations, and also to account for 35 to 40 percent of the total effects.

The initial results based on the Wisconsin data have been submitted to numerous tests drawing on a wide variety of data sets. Examination of the role of significant others and career aspirations forms an important focus of most of this work (Sewell and Hauser 1975; Woelfel and Haller 1971; Kerckhoff 1974; Kerckhoff and Huff 1974; Curry et al. 1976; Curry et al. 1978; Picou and Carter 1976; Porter 1974; Rehberg and Hotchkiss 1972; Williams 1972, 1975; Wilson and Portes 1975; Haller and Butter worth 1960; Duncan, Haller, and Portes 1968; Alexander and Eckland 1974; Alexander, Eckland, and Griffin 1975; Hout and Morgan 1975; Hotchkiss and Chiteji 1981; Duncan, Featherman, and Duncan 1972; Sewell, Hauser, and Wolf 1980; Featherman and Hauser 1978; Otto and Haller 1979). Though specific details differ among data sets, these studies tend to support the status attainment model. The pivotal role of parents continues to emerge from quantitative investigation. (For recent evidence, see Davies and Kandel 1981.)

Human Capital

For an individual's decisions about continuing education beyond high school, the human capital perspective is a useful organizing principle. The focus on individual decision-making fits well with the available data in HS&B and NLS '72.

In its most basic form, the premise of the human capital viewpoint is that additional schooling increases the individual's productivity. That viewpoint reflects the investment motive for acquiring education. Schooling itself may be enjoyable to some people and disagreeable to others, and this fact reflects the consumption motive for acquiring education. Human capital theory emphasizes the investment motive.

The schooling people obtain is finite because schooling imposes costs, not only because of tuition and living expenses but also because it requires time that could otherwise be devoted to either work or leisure. An important element of the total cost of schooling is foregone earnings and leisure.

Theoretical formulations of the human capital model have been analyzed intensively by Becker (1975), Ghez and Becker (1975), Blinder and Weiss (1976), Ben-Porath (1967), Heckman (1976) and Rosen (1976). A large empirical economic literature has grown out of this approach. The early work is summarized by Mincer (1970). A more recent summary is given by Blaug (1976).

Dual Labor Market

For several years following their introductions, respectively, into sociology and economics, the status-attainment model dominated stratification research, and the human capital model dominated economic research of educational attainment. Horan (1978) identifies status-attainment research with a conservative view of stratification processes. He points out that the independent variables predicting status attainments are individual characteristics, implying that status rewards are allocated by a competitive process in a free market. Hence, the similar predictions of status attainment and human capital models should not be surprising. Horan then goes on to identify dual labor market theory as a promising alternative to (or supplement to) the status attainment approach (and, by implication, the human capital approach). The dual labor market theory has stimulated much empirical research (e.g., Doeringer and Piore 1971; Cain 1976; Beck et al. 1978; D'Amico 1982; Tolbert, Horan, and Beck 1980; Rosenberg 1980; Osterman 1975; Kalleberg, Wallace, and Althauser 1981; Jacobs 1982; Tolbert 1982). In fact, in recent sociological journals, papers addressing social stratification that are concerned with the dual economy probably outnumber those that would fit into the traditional status-attainment paradigm.

An important theme in the dual labor market theory is that the effect of human-capital variables on earnings is not the same for those who work in the secondary labor market as it is for those who work in the primary labor market (Pinera and Selowsky 1978). Beck and his associates (1978), for example, find that years of schooling and acquisition of formal degree "interact" with the labor market variable in their earnings equation. Similar findings are reported by Kalleberg, Wallace, and Althauser (1981), and by Tolbert, Horan, and Beck (1980). Although the data are not entirely consistent, education appears to be more effective in producing income in the primary market. To the extent that these differences are accurately perceived by prospective students, the factors that influence educational aspirations and attainment are likely to have different impacts on educational choice depending on whether or not the prospective student expects to find employment in the primary market.

If dual labor market theory did not make an additional hypothesis, there would be no necessary differences between the status attainment view, versions of human capital theory that allow for risk, and the dual labor market view for identifying factors that affect educational attainment. Predictions differ because the dual labor market theory hypothesizes that, even among people with equal amounts of education, access to the primary

labor market differs systematically with race/ethnicity and gender. It hypothesizes that employers use easily identifiable personal characteristics to evaluate suitability for employment in the primary market, which contains the more stable jobs, those with chances for advancement, and those that have attendant fringe benefits. This point of view attempts to explain some aspects of teenage employment problems and the residual bias, in status and pay, against females and minorities that is observed when other possible influences are controlled. It argues that age, race/ethnicity and gender are often the basis for employer hiring decisions.

Dual labor market theory is relevant to postsecondary choices to the extent, first, that occupational aspirations influence educational choices; second, that occupational aspirations depend on perceived labor market opportunities; and third, that perceived labor market opportunities vary systematically by race and gender. People who expect to be unable to use their postsecondary education may elect not to pursue education beyond high school. Or they may select educational patterns that fit the perceived limitations on their occupational choices. In either case the choices they make may be distorted in socially undesirable directions.

Educational Credentialling

The fourth approach grows out of the theory of market signals (Spence 1973; Thurow 1975) and emphasizes the credentialling aspects of educational attainments. It is similar to dual labor market theory in emphasizing the role of access to jobs in determining educational choices and the dominant role of employer hiring decisions in determining access to jobs. It differs from that theory primarily by emphasizing educational credentials rather than age, race/ethnicity, or gender as a principal criterion for hiring decisions.

In this view, education does not necessarily (though it may) impart skills required for performing (or even learning to perform) a specific job. But employers view the educational credential as a reliable, low-cost (easily available) indicator that the individual is likely to perform well in the job (Akerlof 1970, Spence 1973). Possession of the credential provides for people initial access to the job, whether they are or are not more capable than are those without the credential. In this view, educational requirements for hiring may at their inception bear a reasonable relationship to job requirements. But as time passes and average educational attainments rise faster than the average educational levels required for satisfactory job performance, educational screening criteria and true educational re quirements for jobs diverge. Many employers base their hiring decisions on employee credentials that are increasingly irrelevant to job performance, and students base their educational choices more on employer requirements than on either the need to acquire skills or the desire to learn more about a particular area of study. In both cases educational and employment decisions are not socially optimal (Levin and Rumberger 1983; Rumberger 1984).

This theory predicts that many people attending postsecondary education benefit from it only to the extent that they earn access to the hiring process. The education does not necessarily improve their job performance at all. This theory is offered to explain both the secular increases during the 1970s in postsecondary attendance, especially among

groups that traditionally did not pursue postsecondary education, and the observed decline in return to education. A logical extension of the theory predicts that postsecondary enrollment in the 18-22 age group should peak and then level off or decline as students and employers become aware that the true payoff to the credential is less than expected and other hiring criteria are devised to replace or supplement the credential. It also predicts that the relation ship between educational and occupational aspirations should be less well-defined in 1980 than in 1972.

Previous Empirical Studies

Previous research on postsecondary attendance offers some insight into which of these factors suggested by the theories tend to be borne out as important in empirical studies. We are concerned primarily with factors that affect access to post secondary education. But if the decisions of "which school to attend" and "whether to attend any at all" are not separable, then attention should not be restricted to empirical studies that address only the latter question.

The influence of significant others is powerful.[4] Family socio-economic status and its components (parents' education, parents' occupation, parents' income, and learning environment in the home) are all found to influence both the decision of whether to attend and the choice of which institution to attend. Higher composite SES scores increase the likelihood of attendance at any school (CEEB 1974; Christensen, Melder, and Weisbrod 1975; Bishop 1977; Sandell 1976; Jackson 1978; Thomas, Alexander, and Eckland 1979; Bowers et al. 1977; Bailey and Collins 1977; Campbell, Gardner, and Seitz 1982; Campbell, Gardner, and Winterstein 1984), and increase the likelihood of choosing 4-year rather than community colleges (Creech et al. 1977; Clowes and Levin 1980; Hyde 1982; Campbell, Gardner, and Winterstein 1984). In 1961 Project Talent data, middle SES students were more likely than either high SES or low SES students to attend 2-year colleges (Peng 1977). But differences by SES in attendance rates at 4-year schools may be narrowing somewhat and the overall relationship between SES and type of school attended may be changing (Peng 1977). In any event, SES is one of the important correlates of overall attendance and of type of school attended. Higher SES students not only aspire to more education than others, they are also more likely to fulfill that aspiration (Creech et al. 1977).

The higher the level of parents' education the more likely the student is to attend any institution (Corrazini, Dugan, and Henry 1972; Manski and Wise 1983) and the more likely to apply to 4-year colleges (Zemsky and Oedel 1983; Manski and Wise 1983). A particularly interesting recent study using a unique data set and a methodology different from other studies cited in this review, also notes that students with higher parents' education are less likely to see their options as being restricted to the local community or the State of residence (Zemsky and Oedel 1983).

Two studies using NLS '72 find that among other indicators of significant other influence, the greater is the percentage of peers in a person's high school that go to college, the greater is the likelihood the person will attend (Nolfi et al. 1978; Hyde 1982; Campbell, Gardner, and Winterstein 1984). Nolfi et al. (1978) find, in addition, that peer choice of type of institution is associated with the individual's choice.

Parental income is expected by the human capital model to affect both access to any institution and access to specific types of institutions because higher family income (or wealth) eases the financial constraints. A correlation between income and attendance is also expected by the status attainment theory because income and status are closely correlated. Numerous studies using both aggregated and individual data find a strong positive relationship between parental income and whether one attends any school (Tannen 1978; Hoenack and Weiler 1975; Christensen, Melder, and Weisbrod 1975; Bishop 1977; Bishop and VanDyk 1977; Lazear 1980; Nolfi et al. 1978; Manski and Wise 1983; Sandell 1976; Carroll and Relles 1976). Some studies also find that higher income increases the likelihood of attending private rather than public institutions (Hight 1975) or higher-level institutions rather than lower-level ones (Nolfi et al. 1978; Zemski and Oedel 1983; Manski and Wise 1983; Carroll and Relles 1976). Higher family income also reduces the sensitivity to costs of decisions among types of institutions (Nolfi et al. 1978; Bishop 1977; Manski and Wise 1983).

Whether family income affects postsecondary attendance when other factors are controlled, however, is a matter of some dispute in the literature. Most of the studies just cited do control for other factors. But, one study finds that financial need (which is not synonymous with family income but is strongly inversely related to it) is the strongest single predictor of postsecondary enrollment, more potent even than high school curriculum, educational aspirations, or SES. That same study finds that SES does not have much influence on attendance after financial need, educational aspirations, and curriculum are allowed for (Creech et al. 1977). In contrast, Peng, Bailey, and Eckland (1977) find that financial aid and disposable family income have relatively little impact on college attendance when other factors are controlled. Similarly, Peng, Ashburn, and Dunteman (1977) and Thomas, Alexander, and Eckland (1979) find that within social class, parental income does not explain much of the differences in rates of college attendance.

It would appear that SES and family income are so closely related that it is difficult if not impossible to distinguish their effects on enrollment rates. The differences between Creech and the others cited in the preceding paragraph may in part be explained by the fact that financial need is not connected to parental income when the student is living independently of the parents. But that difference is likely to affect only a small percentage of those recent high school graduates who are contemplating college (Campbell, Gardner, and Winterstein 1984). It seems unlikely to account for the substantial differences in the findings of these studies. It is unlikely, as well, that the overview of the data that we can give in this report can resolve that issue. Instead, we focus in chapter 3 on interactions between family income and aptitude scores and between aptitude scores and SES rather than on the SES/income relationship. Even without a resolution of the issue of whether SES or family income is the more important influence on attendance, income is certainly one potential influence that should be given consider able attention in what follows.

Higher scholastic achievement, aptitude, or ability is associated with more frequent attendance at some postsecondary institution (Jackson 1978; Hoenack and Weiler 1975; Bishop 1977; Sandell 1976). Higher achievement, aptitude or ability is associated also with more frequent attendance at 4-year rather than 2-year or vocational institutions (Creech et al. 1977;

Hyde 1982; Clowes and Levin 1980; Nolfi et al. 1978; Zemsky and Oedel 1983; Manski and Wise 1983; Campbell, Gardner and Winterstein 1984). Breneman and Nelson (1981) report a finding that implies an effect of ability on attendance: among all students starting a postsecondary education, higher ability students are more likely to complete successfully a 4-year program.

The relative importance of ability and SES or ability and family income in affecting attendance carries important implications for judging the equity and efficiency of access to postsecondary education. If ability rather than SES or family income were the primary determinant of access, that would imply that a merit criterion is more important than income or status in determining access. One of the main difficulties in empirical work, however, is choosing the empirical measure of ability. Racial/ethnic or socioeconomic bias in "aptitude" tests has been a major controversy in recent years. Moreover, any measure of aptitude that depends heavily on skills developed in school must necessarily combine both aptitude and achievement, which in turn will be related to SES, race/ethnicity, family income, and a variety of other variables. Thomas, Alexander, and Eckland (1979), for example, find that aptitude test scores for NLS '72 are strongly related to race/ethnicity and SES, though not to gender. They also find that other measures of achievement, specifically high school grades and rank in class, are also related to SES and race. But the link with grades and class rank is not as strong as the link with aptitude test scores. The relatively stronger relationship with race/ethnicity and SES for aptitude scores is not surprising, since comparisons of grades and class rank ignore differences in average student ability among schools.

The correlation between SES and most empirical measures of academic ability or aptitude make it very difficult to decide that one is more important than the other. And, indeed, empirical studies have generally found that one is important even when the other is controlled. For example, the College Board in a study published a decade ago found that high SES students were more likely to attend college than were low SES students even when ability was controlled (CEEB 1974). In a study using NLS '72, Peng and Dunteman (1975) found large differences in the rates of postsecondary attendance between high and low SES quartiles, even within aptitude quartile. And Thomas, Alexander, and Eckland (1979) concluded from the relative magnitudes of regression coefficients in a model based on NLS '72 data that included both SES and ability that academic credentials more strongly effect attendance than does SES, even though SES remains a strong influence. The lesson from these studies is that both SES and aptitude should be taken into account as factors affecting post secondary attendance, that interactions between SES and aptitude should be examined whenever the data permit, and that conclusions about the relative strengths of these factors should be heavily qualified.

Specific formulations of cost differ among studies, with some combining tuition with room and board, fees, and travel costs to calculate a total cost, and some including separately one or more of the components of cost. The general finding in both aggregate (Tannen 1978; Corrazini, Dugan, and Henry 1972) and individual data is that higher costs reduce rates of attendance (Christensen, Melder, and Weisbrod 1975; Bishop 1977; Bishop and VanDyk 1977; Hyde 1982; Nolfi et al. 1978; Manski and Wise 1983; Carroll and Relles 1976). The sensitivity may vary with family SES (Hyde 1982) and income, as noted above. Most studies estimate the elasticity of enrollment rates to tuition to be less than one in absolute value, which

implies that although enrollment will fall when tuition is raised, it will not fall by so much that total receipts from tuition will fall. The best elasticity estimates fall in the range from -.2 to -.6. One experiment in Wisconsin even found that the response to increases in tuition may differ from that to decreases of the same amount (cited in Hyde 1982). Several studies also find that relative costs influence choice among institutions (Hight 1975; Barnes 1975; Hyde 1982; Nolfi et al. 1978; Manski and Wise 1983; Carroll and Relles 1976). The type of institution attended and the cost of the institution are both of interest, and an overview of their importance can be obtained here.

Financial aid affects both attendance in general (Tannen 1978; Nolfi et al. 1978; Manski and Wise 1978), selection among institutions (Nolfi et al. 1978; Manski and Wise 1983) and continuation once enrolled (Riccobono and Dunteman 1975). Some entire studies focus on specific aid programs, such as the G.I. Bill (McPherson 1978; Bishop and VanDyk 1977) or BEOG (Manski and Wise 1983). A few even find that sensitivity to aid seems to be higher for low income families than for high income ones (Nolfi et al. 1978; Manski and Wise 1983) and higher for low SES students than for others (Jackson 1978). One study has even found that information availability on aid has an impact on attendance distinct from the impact of the aid itself (Barnes 1975).

But the controversy that surrounds the sensitivity of attendance to financial factors such as family income and tuition level extends also to the question of the importance of financial aid. Jackson (1978) estimates that an applicant who is offered aid by the college of his or her choice is 8.5 percent more likely to attend than an otherwise similar applicant who is not offered aid. He also concludes that the award is more important than its size in influencing attendance. His overall conclusion is that aid is not as strong a force on student access as has been argued in the past. This finding was consistent with earlier work he had done (1976) Jackson in which he concludes that financial aid is less influential than the student's plans in affecting postsecondary attendance. Jackson's conclusion leads in the same direction but does not go as far as Peng, Bailey, and Eckland (1977), who conclude that financial aid has only a slight impact on college attendance. Still another report concludes that even if aid does influence access,

> ". . . the changes in the proportion of aided women relative to aided men are not of sufficient magnitude to suggest that the enrollment changes (of the last two decades are explained by changing student aid patterns." (ASI 1983, p. 13)

Clearly, the type of aid received and the relative reliance of different population groups on specific sources of aid needs to be examined, and a surface examination of it is given in chapter 5.

Whether aid is likely to be effective in influencing access is only part of the concern that policymakers have with financial aid. If aid has an impact, then policymakers are also concerned with the issues of its distribution, whether aid in specific programs is going to those groups for whom it was intended and whether there is an overall balance in aid programs from all sources that permits both equity goals and efficiency goals in access to be met. We return to those issues after considering the rest of those factors that influence access.

The human capital framework suggests that not all dollars of aid should be regarded as equivalent. Aid in the form of work-study or loans should be worth less to an individual than the same amount of scholarship aid because the former demand work or eventual repayment. However, Nolfi et al. (1978) do not find a consistent tendency for scholarship to have a large impact than a loan or work-study offer for the same amount.

But the human capital framework predicts another form of equivalence that does have support in the data. Manski and Wise (1983) find that relative costs net of aid are an important factor in selection among institutions. That is, an increase in tuition will have the same effect on choice as an equal decrease in aid.

As predicted by the human capital theory, higher foregone earnings should reduce the likelihood of attendance at some school. This finding is supported in both aggregate (Tannen 1978; Corrazini, Dugan, and Henry 1972) and individual data (Bishop 1977; Stephenson 1982; Hyde 1982; Lazear 1980; Nolfi et al. 1978; Manski and Wise 1983). In previous studies, available indicators of foregone earnings have included the wage for production workers in manufacturing in the local area and the local unemployment rate. But the impact per dollar of foregone earnings is smaller than the effect of tuition or aid (Nolfi et al. 1978; Bishop 1977), and the overall impact less than that of either the orientation of the postsecondary institution toward minority students or the quality of that institution (Hyde 1982), and may be less important than high school curriculum (Stephenson 1982). Whatever impact foregone earnings seems to have, the effect is higher for students from lower income families than for those from higher income families (Nolfi et al. 1978). One would not expect this factor to influence choice among institutions unless the student was considering combinations of study and work that would be feasible at, for example, a 2-year institution but not at a 4-year one.

Expected returns to education are anticipated to affect both the general attendance decision and choice among institutions, and that expectation is borne out both in aggregated, time-series data (Tannen 1978) and in individual-level data (Dresch and Waldenberg 1978). Choice among institutions should be affected because post-school earnings vary with the quality as well as the quantity of schooling (Morgan and Duncan 1979; Wachtel 1975). Moreover, because of the large difference in return to the fourth year of college over the preceding years (Olson, White, Shefrin 1979; Raymond and Sesnowitz 1975), one would anticipate that students who can complete a 4-year program may prefer 4-year institutions to other programs of shorter duration. That expectation is consistent with the findings cited above concerning scholastic ability and SES. The point here is that one would anticipate effects from expected returns in addition to those associated with ability and SES.

Gender and race/ethnicity are suggested, especially by the dual-labor market perspective, as influential classifications for postsecondary decisions. That gender and racial/ethnic differences in attendance exist is amply demonstrated. The issue is why they persist. Manski and Wise (1983) report that with controls in the analysis, race/ethnicity does not affect the probability of admission to 4-year institutions. But they also find that blacks are more than twice as likely as whites to apply to such institutions (other things equal). Lazear (1980) finds that the return to education for blacks is less than that for whites. If expected returns to education can not be otherwise accounted for in the data, one would expect

to find racial/ethnic differences in decisions corresponding to the racial/ethnic differences in expected returns to education. Polachek (1975) explains the traditional tendency for females to be less likely than males to acquire postsecondary education by noting that females (especially married females) have a lower lifetime labor force commitment than males and therefore have less incentive to invest in education. Selby (1980) finds that a sub-baccalaureate degree does not eliminate wage or status disadvantages for females or minorities in post-school employment. To the extent that minorities and females accurately perceive this effect, one would expect them to be more likely to aim for 4-year degrees. However, another consideration in choosing among institutions is the likelihood of completing the program once one starts. Levin and Clowes (1980) find that blacks and whites have similar success rates in 2-year colleges, but that, once started, whites are more successful in completing 4-year college programs. Females, in contrast, are more likely than males to complete 4-year degree programs (Breneman and Nelson 1981). Relative success rates reinforce the implications of Selby's findings for racial/ethnic minorities, but offset them for females. All of these considerations are somewhat difficult to model individually, but noting the individual's race/ethnicity and gender may suffice in the analyses to detect the summative effects of these considerations.

Other studies have emphasized that each racial/ethnic group has its own pattern of gender differences. Thomas (1980a), for example, notes that black males and females are more alike in their college entry patterns than are white males and females, and Thomas concludes that racial/ethnic differences are relatively more important than gender differences. In earlier work Thomas (1975) had even found that gender differences for blacks were reversed from those for whites, but the subsequent (1980a) research has apparently led to a less emphatic contrast.

Whether race/ethnicity and gender have strong independent associations with access or whether they are merely correlated with other factors that influence access is open to dispute. Some studies have found that when family SES or academic aptitude, or both are controlled, race/ethnicity bear only a loose relationship to postsecondary attendance (Peng and Dunteman 1975; Bailey and Collins 1977; Peng 1977; Bowers et al. 1977; Campbell, Gardner, and Winterstein 1984). Other researchers note that even if all racial/ethnic differences do not disappear when SES and aptitude are controlled, at least SES and/or aptitude seem to have a relatively larger impact than race/ethnicity (Jencks 1972; Featherman and Hauser 1976; Wilson 1979; Thomas, Alexander, and Eckland 1979). Some researchers go so far as to conclude that racial/ethnic patterns in the population as a whole are reversed when SES or aptitude are controlled (Thomas 1975; Thomas 1980a; Thomas, Alexander, and Eckland 1979). Still others find the relationships reversed at least among those from a low SES background (Eckland and Lindsay 1978). Some researchers also emphasize that the relative importance of race/ethnicity, gender, and social background may be different at different points in a person's educational development (Johnston and Taggart 1975; Farley 1977). Finally, some researchers argue that SES differences are important in explaining attendance differences between whites and racial/ethnic minorities but not differences within minority groups (Lichtman, Rothschild, and Peng 1979). This lack of consensus suggests that racial/ethnic and gender patterns should be examined both with and without controls for SES and aptitude and the results compared.

Some observers have concluded that racial/ethnic and gender differences in attendance may have been declining in the mid 1970s (Peng, Bailey, and Eckland 1977) and that gender differences, in particular, declined dramatically (Peng 1977). As noted earlier, the relative overall attendance rates for males and females have reversed between 1972 and 1982, suggesting that the gender differences in 1972 are not the same as those one would expect to find in the HS&B data in 1980-81. Astin (1982), using CIRP data notes that the shift in relative enrollments began as early as 1969 and attributes the shift to the same forces that gave rise to the women's movement and the increased labor force participation of females, as well as to declining enrollment rates for males. Females from lower SES families are more likely to attend now than 15 years ago. Also, attendance rates among males from families with income below the median are less likely to attend now than in 1966, while the percentage of females attending from such families has remained fairly constant (Astin 1982).

Astin also notes that differences in attendance rates between whites and blacks narrowed somewhat. Most of the change had occurred by 1976, as blacks increased their representation in freshman classes from 5.0 percent to 8.7 percent. CIRP data suggest that that percentage has held steady since about 1976. For Hispanics, in contrast, the share of the freshman class rose from the mid to the late 1970s but has declined since that time. Whether the comparisons between NLS '72 and HS&B data support these patterns that appear in the CIRP data is examined in chapter 3.

Like race/ethnicity and gender, regional differences reflect some influences that are not otherwise adequately reflected in the data. These influences may be differences in attitudes toward education but are more likely to be factors such as the mix of schools available or their proximity. Whatever the reason, regional differences have consistently been found. The usual finding is that the Northeast is more likely than any other section to be positively associated with 4-year and private college enrollment, the Mountain States least likely to be so related, and the Far West most likely to involve 2-year college enrollment (Jackson 1978; Tannen 1978; McPherson 1978; Stephenson 1982; Bishop 1977; Breneman and Nelson 1981; Zemsky and Oedel 1983; Manski and Wise 1983; Campbell, Gardner, and Winterstein 1984). Manski and Wise (1983), however, find no regional differences in rates of application or admission to 4-year colleges.

Regional differences are also found to interact with other influences on attendance. Blacks in the South seem to be overall less likely to attend colleges than blacks in the North (Eckland and Lindsay 1978). Lindsay and Eckland (1979) report, using NLS '72 data, that blacks in the South are at a disadvantage compared to blacks in the North on three factors that are closely related to postsecondary attendance: aptitude, SES, and percentage residing in urban areas. Regional differences in these other variables accounted for less than half of the regional differences in college attendance rates for blacks, and thus some interaction of race/ethnicity with region remains to be explained. Jackson (1978) also found regional interactions with SES, noting that low SES students' attendance rates responded more strongly to regional differences (whatever their fundamental source) than did middle or high SES students.

Availability or proximity of school, when measured explicitly rather than implicitly with regional indicators, is shown to be an important positive influence on overall attendance and in choice among types of institutions (Bishop 1977; Bishop and VanDyk 1977; Hoenack and Weiler 1975;

Nolfi et al. 1978; Manski and Wise 1983). Proximity is measured in some studies by the number of schools within a certain radius of the student's home and in other studies by commuting costs (or distance). Hyde (1982) finds that higher commuting costs reduce likelihood of attendance at a specific school, but, contrary to most other studies, that the number of community colleges in the area is not important. Hyde acknowledges that truncation of his sample to predominantly urban areas may distort this finding. Among the other studies of which we are aware, only Sandell (1976) does not find an effect for the availability of local public colleges.

Apart from its effect on post-school earnings (Morgan and Duncan 1979), school quality (or other distinguishing character istics such as total enrollment or programs offered) is expected to have an impact on choice (Wachtel 1975). Higher quality schools attract higher quality students, other things equal. Also, for students of given average ability, the probability of attendance is reduced the higher are a school's admission stand ards, as expressed by test scores (Bishop 1977; Hyde 1982). Manski and Wise (1983) find that the relationship has an inter esting pattern. Students apparently prefer schools where the average SAT score (verbal + math) is about 100 points above their own, neither so low as to be unchallenging nor so high as to be unrealistic. Major research universities tend to draw applicants with better scholastic ability and from families with higher education and income (Carroll and Relles 1976; Zemsky and Oedel 1983).

The prospective student's family situation has an impact on attendance and may have an impact on choice of institution if some institutions (such as 2-year colleges) can better accommodate nontraditional schedules or programs. For example, among older prospective students the presence of children under 6 years of age reduced attendance for females but not for males (Bishop and VanDyk 1977). Polachek (1975) finds that single females are more likely to enroll than married females. He notes that this pattern is rational within the human capital framework because single females have greater expected lifetime labor force commitment. Breneman and Nelson (1981) find that among people starting programs, those who are married, live with parents, or have children were less likely to complete 4-year programs. Finally Nolfi et al. (1978) notes that living on campus is apparently preferable for most students to living at home. Some types of institutions facilitate living away from home and would therefore be expected to be preferable, other things equal.

The last factor to be considered here is high school program. Again, this is a variable that may be proxying for other factors that are not well measured. Kolstad (1979), for example, finds that curriculum specialization is not very important when other factors are controlled. But Creech et al. (1977); Fetters, Dunteman, and Peng (1977); and Jackson (1978) find curriculum closely related to overall attendance rate, and Stephenson (1982) and Hyde (1982) find that curriculum is the best indicator of whether the student attends any postsecondary institution at all. Furthermore, Hyde (1982); Campbell, Gardner, and Seitz (1982); Gardner, Campbell, and Seitz (1982); and Campbell, Gardner, and Winterstein (1984) find that curriculum is a good indicator whether the student will attend a 4-year rather than a community college, even when many other factors are controlled. Finally, academic curriculum students are also more likely than others to fulfill their more ambitious educational plans (Creech et al. 1977). Completeness of the set of controls is an issue in the Stephenson and Hyde studies, but

high school curriculum is certainly closely related to postsecondary decisions. The direction of causation (curriculum ⟶ attendance or planned attendance ⟶ curriculum) is an open issue.

This review suggests that the influences listed in exhibit 1 affect aspirations or expectations, attendance, decisions about the type of school to attend and the program to select, and the use of various types of financing mechanisms. We do not consider in detail here room and board, books and fees, transportation costs, the marital status and number of dependents, and the expected returns to education. Other influences are treated only very generally. For example, as we noted earlier, the proximity of schools shows some variation by region, with those regions that have a large share of urban areas more likely than other regions to have schools closer to most residents. Proximity of school is treated here only to the extent that variations in outcomes by region might be atrributable, in part, to variations in the proximity of schools. Similarly, postsecondary school quality is treated here only indirectly, to the extent that it is related to broad categories of types of schools, that is, 4-year, 2-year, vocational, public or private.

Further Consideration of Financial Aid Issues

As we noted earlier, the issue of whether financial aid, in principle, has an impact on access to postsecondary education gives rise to subsidiary issues of whether the current programs of financial aid are operating as designed and whether they are designed to provide a balance in promoting both equity and efficiency in access. Our examination in chapter 5 of the financing data available in HS&B allows us to draw some inferences about how efficiently or equitably existing financing mechanisms (especially Federal programs) have been operating and how well or poorly they fit together.

We noted earlier the substantial growth over the last 20 years in Federal programs of student aid. Gillespie and Carlson (1984) help put that in perspective by noting that total student aid from all sources has grown much more rapidly since 1963-64 than those expenditures for education that are classified as meeting educational and general expenses. The growth rates of total aid and educational and general expenses are about the same over the shorter period that more nearly corresponds to that covered in this report, 1970-71 to 1983-84. But the growth rates have not been steady over even this shorter period. Aid grew faster than expenses from 1970-71 to 1981-82, but since then aid has been reduced.

When financing sources are classified into a few broad categories and expressed in terms of full-time equivalent students, in order to adjust for increases in population and enrollment, it is clear that the contribution of the various categories to the full amount of financing needed has changed. Between 1970-71 and 1980-81, grants nearly tripled (from $441 per FTE student to $1,112), loans more than tripled (from $193 to $796) and financing from student work-study has more than doubled (from $34 to $75). In terms of dollars adjusted for changes in purchasing power, however, the scale of increase is somewhat less dramatic. In real terms, grants per FTE student have increased only about 25 percent over that decade (from $1,071 to $1,239 of 1982 purchasing power), loans have not quite doubled ($468 to $887), and work-study has shown almost no increase at all ($82 to $84).

One may also classify aid by its source, such as Federal government, State or local government, school funds, family or friends, own efforts, or other private sources. This classification is useful in evaluating the complementary or overlapping pattern of aid and in deciding whether specific aid programs from a single source are allocated consistently with a single broad purpose or a variety of purposes. Some Federal programs that have been in force at some time over the past decade are designed to be related to financial need. These include Pell grants, SEOG grants, nursing scholarship and loan programs, the health professions scholarships and loans, National Direct Student Loans (NDSL), and College Work-Study programs. Other Federal programs, such as the G.I. bill, Social Security educational benefits, V.A. survivors' benefits, Vocational Rehabilitation benefits, Guaranteed Student Loans, and law enforcement educational program grants are based on other critieria that need not necessarily coincide with financial needs. One should not expect, therefore, that clear, interpretable patterns should emerge when all types of Federal aid are compared with all sources of non-Federal aid. Nevertheless, Tabler and Wagner (1977) concluded from NLS '72 data that low SES and minority students were more likely to receive any kind of Federal aid than were other students. They also found that, among the specific sources, low SES and minority students were more likely to receive Federal transfer benefits such as Social Security, Pell grants, etc.), College Work-Study, and Federal loans than were other students. They further con cluded that recipients of combinations of Federal and non-Federal aid tended to be low SES or minority students and that those who received only non-Federal aid tended to be from a higher SES background. Another study reports on the basis of NLS '72 data that low SES students are more likely than high SES ones to ful fill their expectations of receiving aid from Federal sources (Riccobono, Bailey, and Dunteman 1976).

One would expect that MISAA and other more recent actions would have changed that distribution somewhat when aid includes both Pell grants and GSL's. In agreement with that expectation, one study (ASI 1983) notes that minority students were more likely than others to receive Federal aid (from any one or more of five programs) in both 1974 and 1981 than were other students. It notes also that for blacks the real (adjusted for purchasing power) family incomes of aid recipients from these five programs were lower in 1981 than in 1974, whereas for whites the real in comes of aid recipients were higher in 1981 than in 1974. It concludes that MISAA had its intended effect of expanding access to financial aid to more middle and upper-middle income families. But the study goes on further to emphasize that such broad cen tral tendencies conceal much variation among specific programs. It notes, for instance, that Guaranteed Student Loans were used relatively much more frequently by whites (especially those from families with incomes above $20,000) in 1981 than in 1974.

Another classification that is used frequently is one that identifies financing as campus-based or non-campus-based. This method is used by both Barnes and Neufeld (1980) and Gillespie and Carlson (1984). The distinction refers not to aid from institutional funds, but to aid over which financial aid officers of the institutions have discretion. These campus-based programs include SEOG, nursing and health professions scholarships and loans, NDSL, College Work-Study, and scholarships and grants funded though institutional resources. The common element in all of these campus-based programs, aside from the role of the institutional

EXHIBIT 1

INFLUENCES ON POSTSECONDARY SCHOOL DECISIONS

Significant Others
- Family SES (Parents' education and occupations)
- Parents' Aspirations for their Children
- Peer Choices

Parental Income

Scholastic Achievement and Ability

Gender

Race/ethnicity

Region of the Country

High School Curriculum

Financial Aid
- Scholarships and Grants
- Loans
- Work

Costs-Explicit
- Tuition
- Room and Board
- Books and Fees
- Transportation

Cost-Implicit
- Foregone Earnings

Expected Returns to Education

Proximity of Schools (Region as a proxy)

Postsecondary School Quality (Type of School as a proxy)

Marital Status

Dependents

financial aid officer, is that all except those from institutional resources are supposed to be need-based (Barnes and Neufeld 1980). Despite these differing criteria for distribution of funds, Barnes and Neufeld conclude using NLS '72 data that financial need is related only weakly either to the likelihood of receiving an offer of campus-based aid or to the size of the offer. Higher family SES is associated with a lesser likelihood of receiving an offer of campus-based aid, and higher-ability students are more likely to receive such offers. But by combining need-based aid with a source of aid that is substantial and is not based on need, Barnes and Neufeld have guaranteed that the relationships will be weak. This example argues strongly for looking at specific programs before concluding that they are or are not reaching their intended beneficiaries.

Other studies with similar ambiguities in defining aid abound. Three examples serve to illustrate the ambiguity. Kohn, Manski, and Mundel, using SCOPE data (1974), defined aid to include both grants and loans and a mixture of need-based and other programs. They find that aid varies inversely with parents' income and directly with student ability. Riccobono and Dunteman (1975) find that minority students, low-income students, and those attending vocational-technical or 2-year schools are more likely than others to report receiving some kind of aid, without differentiating need-based aid from other forms. Corrallo and Davis (1977) report that financial aid tends to equalize the net price to students, implying that aid is based primarily on financial need. These conclusions can not easily be compared with the contrasting conclusions of Jackson (1978) and Barnes and Neufeld (1980) because definitions of "aid" differ so much among the studies.

The HS&B data classify sources into four categories. The first is aid and includes all grants and scholarships, any assistance from a source outside the family that does not have to be repaid or that does not represent payment for specific labor performed by the student. The second is loans, which includes Federal, State, and private loans from many sources. The third is assistance from friends and relatives, including parents. The fourth is the student's own funds, whether accumulated savings or earnings before or during the enrollment period. The data presented in chapter 5 are presented first in those categories. The problem with the broad categories, of course, is the same problem that existed with categorizations of Federal/non-Federal or campus-based/non-campus-based. In assessing whether programs are operating as designed and whether they complement, duplicate, or work at cross-purposes, the HS&B broad categories have the same problems as the other classifications. The overall HS&B categories are just convenient suggestions for ordering the discussion of the programs.

Later in chapter 5, figures on the use of specific financing sources are presented as well as figures on the frequency of use of the broad categories of financing. Because the data are student-reported, one has more confidence in the accuracy of reports within the broad categories than in reports by specific source. But the much greater usefulness of the reports by specific source argues strongly for looking at those data, even while reserving judgment about the strength of conclusions that are drawn from them. Further discussion of the previous studies that have provided detail about specific sources of financing is also deferred until chapter 5, where the results of these previous studies are compared with the figures from the HS&B data for each specific source.

CHAPTER 2

EDUCATIONAL EXPECTATIONS

Educational expectations and postsecondary enrollment are closely correlated and influenced by many of the same factors (Thomas 1980a; Creech et al. 1977; and Lichtman, Rothschild, and Peng 1979). Hence, understanding educational expectations is important in understanding the factors that influence enrollment decisions. Indeed, a number of researchers have concluded that differences in students' motivation, aspirations, and goals are more important than many other factors, such as family income, in explaining differences among social classes in levels of educational attainment (Cramer, Bowerman, and Campbell 1966; Alexander and Eckland 1974; Sewell and Hauser 1975; Jackson 1976; and Thomas, Alexander, and Eckland 1979).

We begin by looking at the expectations of high school seniors in 1980 and comparing them with high school seniors in 1972. We examine the relationships between the level of education people expect to attain and their racial/ethnic background, gender, socioeconomic background, family income, academic performance, and the region of the country in which they live, and we consider how those relationships have changed over the last decade. We examine whether those who plan to attend a postsecondary institution expect to start in the fall following their high school graduation or at some other time. We also look at the types of schools preferred by each race/gender group. Then, in recognition of the strong effect that the status attainment theory predicts that parents' aspirations for their children should have on children's attendance patterns, we consider the match between parents' educational aspirations for their children and the child's own educational expectations. We also examine whether the degree of that match varies among race/gender groups.

Level of Education

The overall level of education that high school seniors expect to attain has not changed a great deal between 1972 and 1980 (table 2-1). The percentages of all high school seniors expecting only to graduate from high school, to attend trade school, or to attend college below the bachelor's degree are each about the same in 1980 as they were in 1972, although we will see later that those overall figures conceal some important variations among groups of students.

The dominant change in expectations comes at the bachelor's degree level and above. About the same percentage of high school seniors in 1980 as in 1972 expected at least a bachelor's degree, but the fraction who expected only a bachelor's degree has fallen by nearly 13 percentage points while the fraction seeking education beyond the bachelor's degree has risen by more than 8 percentage points. That is, in 1980 a larger fraction of those students who seek at least a bachelor's degree are more likely than in 1972 to aspire to even further education. The changes in educational expectations are consistent with those found by Astin (1982), although the HS&B data suggest that the change has been much greater than CIRP data would show. Astin further notes that aspirations for doctoral-level education peaked in 1977 and have since fallen slightly for males and leveled-off for females.

Table 2-1--Percent of high school seniors in 1972 and 1980 expecting to attain specified levels of education

	NLS '72		HS&B	
Total	100.0		100.0	
High school graduate	19.4		19.2	
Trade school				
LT 2 years	18.6		7.9	19.5
Two or more years			11.6	
College				
LT 2 years	12.7		2.9	15.3
Two or more years			12.4	
Bachelor's degree	36.7	49.2	25.2	46.0
Master's degree	12.5		11.9	20.8
Doctorate degree			8.9	

NOTE: High school graduation category includes those not aspiring beyond high school graduation.

Educational expectations in 1980 varied with academic ability, socioeconomic background, and family income in conformance with the predictions of status attainment and human capital explanations of educational enrollment behavior (table 2-2). Higher academic ability students were more likely to expect to earn college degrees or to attend graduate schools and less likely to expect to achieve only high school graduation than were students of lesser ability. Similarly, students from families with higher socioeconomic status or higher family income were much more likely to expect at least the bachelor's degree and less likely to expect only high school graduation than were students from families with lower status or less income.

Those seniors expecting only to attend trade schools come predominately from the lower half of the test-score or SES ranges. Family income is not a good indicator of expectations of trade schools, as the percentage expecting to attend trade schools is with one exception, relatively constant across most income levels.

Among students expecting to attend a college, but not obtain a college degree the differences among test quartiles or SES quartiles are not dramatic. Furthermore, the middle ranges of test and SES quartiles contain larger proportion of students with this educational expectation than either the lowest on highest quartile. Across almost all income categories only about 2 to 3 percent expect to attend college, but for less than 2 years and about 13 percent expect at least two years of college but not a degree. The only exception is that students in the highest income category are somewhat less likely than others to expect to attend college for at least two years but not get a degree (table 2-2).

The HS&B data suggest that in 1980, females' educational expectations were, overall, higher than males'. That is, within each racial/ethnic group, males are between 3 and 5 percentage points more likely to expect high school graduation only. Females also are more likely to expect college below the level of the bachelor's degree. Males and females are about equally likely to expect to earn at least a 4 year degree.

Blacks are much more likely than Hispanics of the same gender and slightly more likely than whites of the same gender to expect more schooling than high school. Black males are about as likely as white males to expect at least a 4-year college degree. Black females are substantially more likely than other females to expect graduate degrees. Hispanics, in contrast, are much less likely than either whites or blacks to expect at least 4 years of college.

High school curriculum is an accurate indicator of the level of educational expectations. Students in a vocational curriculum are eight times more likely and those in a general curriculum six times more likely than those in an academic curriculum to expect high school graduation only. Vocational and general curriculum students are also more likely to expect to attend trade school and less likely to expect to earn a 4-year degree.

There are regional differences in educational expectations, but the precision of these estimates is less than for groups characterized by race or gender. The fraction expecting 4-year degrees does not differ significantly among regions, and (except for the Pacific States) the percentage expecting only high school graduation is also not significantly different. But expectations of graduate education are higher in the Northeast and the Middle Atlantic States than in the four central regions, and expectations might be higher in Pacific States as well, but the

Table 2-2--Percent of HS&B seniors with selected background characteristics expecting to attain specified levels of education (percents based on raw totals).

Characteristics	Educational Expectation						
	High School Graduate	Trade School		College			
		LT 2 years	2 or more years	LT 2 years	2 or more years	bachelor's degree	graduate degree
Males							
Hispanic	31.8	7.2	12.4	3.3	12.0	18.2	15.0
Black	17.9	5.8	14.3	2.1	10.3	27.9	21.8
White	20.7	6.9	13.4	1.7	9.3	26.4	21.7
Females							
Hispanic	26.2	8.0	13.9	4.7	14.9	17.7	14.5
Black	13.8	7.6	14.0	2.2	12.0	24.4	26.1
White	16.9	9.2	9.1	4.0	15.6	25.4	19.9
Test Quartile							
Low	39.0	11.4	16.2	3.9	10.9	11.2	7.4
2nd	22.4	10.6	14.8	4.1	14.5	22.1	11.6
3rd	13.1	7.7	10.2	2.2	15.6	31.0	20.3
High	3.5	1.9	5.0	1.5	8.4	36.4	43.4
SES Quartile							
Low	34.3	11.4	13.8	2.8	11.9	15.2	10.5
2nd	23.4	10.6	14.4	3.5	13.8	20.9	13.5
3rd	12.8	8.0	11.8	3.5	13.4	30.8	19.8
High	5.3	1.8	6.2	1.7	10.6	34.4	40.0
Curriculum							
General	25.9	9.9	13.6	3.7	13.6	21.9	11.5
Vocational	32.4	14.2	19.1	3.5	13.8	10.7	6.2
Academic	4.0	2.0	4.6	1.7	10.5	37.8	39.4
Advanced Courses							
Yes	2.1	1.8	4.2	0.9	8.3	34.5	48.0
No	20.4	8.4	12.2	3.0	12.8	24.5	18.7

Table 2-2 Continued

Characteristics	Educational Expectation						
	High School Graduate	Trade School		College			
		LT 2 years	2 or more years	LT 2 years	2 or more years	bachelor's degree	graduate degree
Region							
NE	17.5	4.0	10.3	1.4	13.3	25.6	27.9
MA	22.1	4.4	8.3	1.6	12.1	26.2	25.2
SA	19.8	7.8	14.0	2.1	11.7	24.2	20.5
ESC	20.9	12.3	12.4	4.2	12.8	22.9	14.6
WSC	21.5	7.0	12.0	2.2	11.6	27.2	18.5
ENC	20.3	8.6	12.5	3.7	11.6	25.2	18.1
WNC	16.3	14.4	13.4	2.9	8.6	26.0	18.3
MTN	18.4	11.0	12.9	4.4	14.5	22.2	16.7
PAC	13.6	6.9	9.5	4.5	16.8	24.8	23.8
Family Income							
0-6,999	35.9	8.4	10.7	2.4	12.0	17.5	13.2
7,000-11,999	24.5	9.1	12.9	3.9	13.4	20.8	15.4
12,000-15,999	24.4	9.8	13.6	2.7	13.5	20.4	15.7
16,000-19,999	22.8	9.2	13.7	3.5	12.6	23.8	14.4
20,000-24,999	15.3	8.6	13.2	2.5	12.8	25.6	22.1
25,000-37,000	11.4	7.1	10.0	2.3	12.2	31.5	26.0
38,000 and up	10.9	3.0	7.1	2.5	9.8	30.5	36.2

NOTE: Respondents not answering the expectations questionnaire included in the base for calculating percentages but are not shown. If they were listed, each row would sum to 100. High school graduate expectations included a small percentage who expect less than high school graduation.

estimates are not precise enough to be certain. Also, the percentage of seniors expecting to attend college at a level below the bachelor's degree is higher in the Pacific States than elsewhere. Finally, a higher percentage of students in the East South Central, West North Central, and Mountain regions than elsewhere expect to attend a trade school for less than 2 years.

Differences in Expectations Among Cohorts Over a Decade

Expectation levels have changed over the past decade primarily with regard to the distribution between bachelor and graduate levels. But other differences are more evident among subgroups than in the aggregate, as seniors in some groups are more likely than those in other groups to be content with high school graduation only. In those groups in which fewer students in 1980-81 than in 1972-73 aspired to postsecondary education, these data suggest that some of these changes may be consistent with the belief that high school students have been shifting toward last decade. But it is also clear that substantial social changes in attitudes toward education and toward the role of females and changes in the proportions of ethnic minorities in the country have also contributed to these changes in expectations.

Consider, for example, that white males are more likely now than they were in 1972 to expect only high school graduation. White females, in contrast, were much less likely now than in 1972 to expect only a high school diploma. The 6.6 percentage point decrease (23.5 to 16.9) for white females expecting no education beyond high school represents more people than does the 5.0 percentage point increase (15.7 to 20.7) in white males expecting only a high school education. The patterns for blacks are similar but less dramatic (tables 2-2 and 2-3). These changes coincide with a transformation in the labor market that has seen recently for the first time a majority of females participating in the labor force. It has also seen white males become less than a majority of those working for the first time since these data have been collected (BLS 1984).

Hispanics provide a contrast to the changes in expectations for whites and blacks. Hispanic males are more than twice as likely in 1980 as they were in 1972 to expect only high school graduation. Hispanic females also show a substantial increase in the percentage expecting only high school graduation (tables 2-2 and 2-3).

These changes in expectations for high school graduation are only part of the story. At the other extreme of educational attainment, a higher percentage of whites, both males and females, expect in 1980 to pursue education beyond the bachelor's degree. For females of any racial/ethnic background, substantially larger fractions expect to continue their education beyond the bachelor's degree than in 1972. Even for Hispanic males the percentage wanting to go beyond the bachelor's degree has increased since 1972.

These increases in percentages who fall at either end of the range of educational expectations must mean that at least for some intermediate levels the percentages expecting those levels have fallen. For both white and black males, the fraction expecting to attend trade schools has actually increased slightly and the fraction expecting college work below the bachelor's level has changed by only a little. For Hispanic males, trade

Table 2-3--Percent of NLS '72 seniors with who selected background characteristics specified educational expectations.

Characteristics	Total	Educational Expectations				
		High School Graduate	Vo-Tech School	2-Year College	University	Graduate School
Males						
Hispanic	100.0	14.1	16.1	22.9	34.7	12.2
Black	100.0	14.7	19.2	10.0	43.4	12.6
White	100.0	15.7	17.9	11.7	38.3	16.5
Females						
Hispanic	100.0	15.8	27.3	19.9	30.5	6.5
Black	100.0	15.1	24.2	9.9	35.7	15.2
White	100.0	23.5	18.6	13.7	36.0	8.3
Region						
Northeast	100.0	22.2	15.9	10.9	37.1	14.3
North Central	100.0	21.3	22.6	10.4	34.7	10.9
South	100.0	18.4	19.6	10.5	38.2	13.2
West	100.0	14.0	13.9	22.7	37.6	11.9
Test						
Low	100.0	38.1	29.4	12.9	16.0	3.5
2nd and 3rd	100.0	22.0	21.8	15.1	33.1	8.0
High	100.0	6.0	8.7	8.2	53.4	23.6
Curriculum						
General	100.0	27.9	23.6	16.2	27.2	5.1
Vocational	100.0	38.8	33.4	13.6	11.4	2.7
Academic	100.0	4.6	8.4	9.8	55.0	22.2

NOTE: High school graduate pertains to those with expectations for <u>at most</u> high school graduation. Row percentages may not sum to 100 because of rounding.

schools are slightly more popular in 1980 than they were, and the percentages expecting either junior college or to complete the bachelor's degree have dropped considerably. The dramatic change has come in the Table 2-3 percentage expecting only a bachelor's degree, down 12 percentage points for white males and 15 for black males from 1972. For females as well as males, the principal reduction has come in those expecting just to earn the bachelor's degree. The percentages are down by 13 points for Hispanic females and 11 points for both white and black females.

But the racial/ethnic groups differ in other respects in the way their expectations have changed. The percentage of white females expecting to attend trade schools has remained about the same, but the percentage for blacks and Hispanics has fallen somewhat over the decade. Both black and white females are more likely in 1980 than in 1972 to expect some college below the bachelor's level, whereas the percentage of Hispanic females with similar expectations has not changed over the decade.

These data suggest that any narrowing of racial/ethnic differences in educational expectations that occurred before 1972 has not continued to 1980. There is some indication that the expectations of blacks (especially black females) actually were a little higher than expectations of whites in both 1972 and 1980. Those researchers who found a narrowing of differences by race include Porter (1974), and Portes and Wilson (1976). But their data apply to the period before 1972. In contrast, the HS&B data show that Hispanics differ from whites more now than they did in 1972, and that black/white differences have not changed significantly since 1972.

Some additional insight into why these changes are taking place and occurring differently for some groups than for others may be obtained by looking at the relationships between expectations and high school curriculum, academic performance, and region of residence.

All three curriculum categories show some decrease over the decade in the fraction expecting merely to graduate from high school, but the largest decrease, 7 percentage points, occurs for vocational students, with general students falling less than 3 percentage points, and academic students less than 1 percentage point. The percentages within each curriculum group that aspire to each intermediate level between high school graduation and the bachelor's degree do not show much change from 1972.[5] The principal increases occur in the aspirations to degrees at the bachelor's level and beyond. For general curriculum students, the percentage expecting at least the bachelor's degree has not changed much (from 32.3 = 27.2 + 5.1 to 33.4 = 21.9 + 11.5), but about 6 percentage points within the group have shifted from the bachelor's degree only to degrees beyond the bachelor's (5.1 to 11.5). For vocational students there is an increase of about 4 percentage points in the fraction seeking education beyond the bachelor's degree (2.7 to 6.2). For academic curriculum students, the total aspiring to at least the bachelor's degree remains the same (77.2 = 55.0 + 22.2 to 77.2 = 37.8 + 39.4), but the shift within that group toward work beyond the bachelor's is dramatic. That higher level claimed about 17 percentage points more (39.4 - 22.2) of the academic students in 1980 than in 1972.

Students with above average academic aptitude are less likely now than they were in 1972 to be content with achieving only a high school graduation. For the lowest test quartile, the fraction expecting only high school graduation has not changed. But for the other quartiles there has been a slight decrease in that percentage. Among all test quartiles there has been a considerable shift from expectations of a bachelor's degree to expectations

beyond the bachelor's. It is evident even in the lowest test quartile. There are not other notable changes among the intermediate educational levels.

There do not appear to be many clear cut differences in changes in expectation patterns among the regions of the country. About the only noticeable difference is that expectations of college at levels below the bachelor's degree are somewhat lower now in the West than they were in 1972, whereas each of the other regions shows a slight increase in expectations at that level.[6]

Type of School

A slightly different perspective on educational expectations is given by the types of schools seniors prefer to attend. The type of school for which seniors expressed their preference varies somewhat by race/ethnicity and gender, but the level of educational expectations is a primary determinant. In order to keep the groups in the tables large enough to analyze, we distinguished only between those expecting at least a bachelor's degree and those with lesser expectations.

Those seniors expecting at least a bachelor's degree preferred 4-year colleges to other types of institutions. This overwhelming preference suggests that most students who expect the bachelor's degree would prefer not to use community or junior colleges as an intermediate step on the way toward that degree. This observation is reinforced by the fact that very few students expecting the bachelor's degree express a preference for part-time attendance. Nearly 85 percent prefer to attend 4-year institutions full-time. The only substantial expression of interest in part-time attendance comes from 4 percent, who want to attend in-state public 4-year institutions part-time (table 2-4).

Those students expecting less than the bachelor's degree are more likely to prefer 2-year institutions and part-time attendance than are bachelor degree aspirants. About two-thirds as many students want to attend part-time 2-year public in-state institutions as want to attend those same institutions full-time. Also those students aspiring to less than a bachelor's degree, prefer in-state schools to those out-of-state. Among students expressing a preference for public 2-year institutions, 10 times as many preferred in-state schools as preferred those out-of-state. This dominance of in-state schools is rational because of the expense and inconvenience of out-of-state schools (table 2-5).

Some combinations of school types and locations are unlikely, and these stand out from tables 2-4 and 2-5. Out-of-state 2-year institutions are unpopular for either part-time or full-time study. Private 2-year institutions are seldom preferred, whether in- or out-of-state. Finally, out-of-state 4-year institutions are not very likely to be preferred for part-time study.

Interesting differences in preferences emerge among the race/gender groups. For whites expecting at least the bachelor's degree, males are more likely than females to prefer public out-of-state institutions, whereas females are more likely than males to prefer private out-of-state institutions. Otherwise the preferences of white males and females look quite similar. The preferences of Hispanics who aspire to 4-year institutions are fairly close to those of whites. But Hispanic females are

Table 2-4--Percent of HS&B seniors expecting to obtain a bachelor's degree or higher, by type of school and attendance preferred, and by gender and race/ethnicity

Type of School Preferred	Males			Females			Males & Females
	Hispanic	Black	White	Hispanic	Black	White	Total
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Public - 4-Year							
In-state, full-time	45.0	36.0	47.0	47.0	50.0	44.0	45.3
In-state, part-time	6.0	7.0	3.0	.7	7.0	5.0	4.3
Out-of-state, full-time	5.0	20.0	11.0	8.0	10.0	7.0	9.4
Out-of-state, part-time	.7	3.0	0.8	.7	3.0	.7	.9
Private - 4-Year							
In-state, full-time	17.0	10.0	15.0	13.0	9.0	15.0	14.3
In-state, part-time	0.0	.6	0.6	2.0	2.0	0.2	.5
Out-of-state, full-time	13.0	16.0	13.0	4.0	8.0	19.0	15.1
Out-of-state, part-time	.7	0.0	0.1	0.0	1.0	0.0	.1
Public - 2-Year							
In-state, full-time	8.0	4.0	6.0	9.0	5.0	6.0	6.0
In-state, part-time	3.0	2.0	3.0	6.0	3.0	2.0	2.7
Out-of-state, full-time	0.0	.6	.5	.7	1.0	.1	.4
Out-of-state, part-time	0.0	.6	0.0	0.0	.4	.3	.2
Private - 2-Year							
In-state, full-time	0.0	0.0	.2	0.0	0.0	.3	.2
In-state, part-time	7.0	0.0	.2	.7	0.0	.3	.2
Out-of-state, full-time	0.0	0.0	.3	.7	0.0	.5	.4
Out-of-state, part-time	0.0	0.0	.1	0.0	0.0	0.0	0.0

NOTE: Column percentages may not sum to 100 because of rounding.

Table 2-5--Percent of HS&B seniors expecting to obtain less than a bachelor's degree, by type of school and attendance preferred, and by gender and race/ethnicity

Type of School Preferred	Males			Females			Males & Females
	Hispanic	Black	White	Hispanic	Black	White	Total
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Public - 4-Year							
In-state, full-time	8.0	20.0	11.0	10.0	15.0	12.0	11.8
In-state, part-time	6.0	5.0	4.0	5.0	7.0	4.0	4.4
Out-of-state, full-time	3.0	11.0	4.0	1.0	8.0	3.0	3.8
Out-of-state, part-time	2.0	2.0	0.5	1.0	1.0	.7	.8
Private - 4-Year							
In-state, full-time	2.0	2.0	3.0	5.0	3.0	2.0	2.3
In-state, part-time	0.0	2.0	1.0	0.0	0.0	1.0	1.2
Out-of-state, full-time	0.0	2.0	2.0	0.0	1.0	.8	1.1
Out-of-state, part-time	0.0	0.0	1.0	0.0	0.0	.4	.7
Public - 2-Year							
In-state, full-time	31.0	20.0	37.0	37.0	25.0	33.0	33.3
In-state, part-time	35.0	18.0	26.0	31.0	24.0	27.0	26.9
Out-of-state, full-time	2.0	5.0	3.0	1.0	6.0	2.0	2.6
Out-of-state, part-time	2.0	9.0	2.0	0.0	6.0	3.0	2.8
Private - 2-Year							
In-state, full-time	2.0	0.0	1.0	6.0	1.0	6.0	4.1
In-state, part-time	6.0	0.0	3.0	2.0	0.0	2.0	2.4
Out-of-state, full-time	2.0	2.0	1.0	0.0	0.0	2.0	1.5
Out-of-state, part-time	0.0	0.0	0.0	0.0	3.0	.3	.3

NOTE: Column percentages may not sum to 100 because of rounding.

much less likely than white females to express a preference for private out-of-state 4-year institutions. Differences among those preferring 2-year institutions are not precise enough to measure in table 2-4.

The principal differences by race/gender are between blacks and all others and between black males and black females. Black males who expect a 4-year degree are much more likely than white or Hispanic males to express a preference for out-of-state public 4-year schools, and they are correspondingly less likely to prefer in-state public 4-year schools. It does not appear that the difference in preference is related to the public or private nature of the school or to whether it is a 2-year or 4-year institution. Rather the key distinction seems to be between in-state and out-of-state schools (table 2-4).

The last race/gender pattern that we will note here concerns seniors who expect less than the bachelor's degree. Again, blacks differ from whites and Hispanics in their preferences. Both black males and black females prefer 4-year institutions more often than do whites or Hispanics (table 2-5). As with those expecting at least the bachelor's degree, white and Hispanic males show similar preferences for most types of institutions. The exception is that white males show a greater preference for full-time and Hispanics for part-time attendance among those preferring 2-year, public, in-state institutions.

Timing of Attendance

Most students who intend to attend college expect to attend in the fall following their high school graduation. Interestingly enough, it is lower aptitude and lower SES students who express expectations for attending after a year of delay. Students in higher test quartiles, higher SES quartiles or with higher levels of family income are generally more likely to plan to attend college the year following graduation. Also, students in the Northeast are more likely to expect a delay of a year or more than in most other regions. Delays of more than 1 year are not likely overall, but residents of Mountain Region States are the most likely to say that they expect such a delay. That family income has an influence on likely attendance patterns is hinted at by the fact that students from lower income families are somewhat more likely than those from higher income families to say that they expect delays of 1 or more years in their college attendance (table 2-6).

Parental Aspirations for their Children

The status attainment theory emphasizes the strong role of parents' aspirations and status on their children's educational attainment (and, by implication, on their educational aspirations and expectations). The survey does not ask parents of all students for their educational aspirations for their children. Parents of a subset of the students were asked the question in the HS&B Parent survey, but because of the small number in the subset, we are not reporting on those answers here. Instead, we are using the student's own report of what their parents expect them to do the year following their high school graduation. We compare this with the level of education that the students expect to attain.

Table 2-6--Percent of HS&B seniors with specified plans for college attendance, by selected background characteristics

Characteristics	Plans for College			Don't Know	No
	Next Year	After 1 Year	After Several Years		
Males					
Hispanic	47.7	7.2	4.4	14.5	26.2
Black	58.2	6.7	3.5	16.4	15.3
White	57.0	6.4	3.5	10.3	22.8
Females					
Hispanic	52.3	10.2	3.3	12.7	21.5
Black	63.6	9.1	4.2	10.1	13.0
White	63.2	7.0	2.6	9.9	17.3
Test Quartile					
Low	32.7	8.3	4.7	17.0	37.4
2nd	51.0	8.5	3.3	13.0	24.2
3rd	65.8	7.2	3.4	8.3	15.2
High	85.4	4.2	2.0	4.3	4.2
SES Quartile					
Low	39.7	8.6	3.6	16.3	31.8
2nd	51.3	7.0	4.0	12.2	25.6
3rd	65.6	7.1	2.8	9.1	15.4
High	82.0	5.4	2.2	4.9	5.5
Region					
NE	63.7	11.8	1.8	8.0	14.8
MA	60.8	5.5	3.0	8.4	22.3
SA	60.0	6.6	3.6	11.1	18.7
ESC	55.2	7.3	2.2	12.0	23.2
WSC	57.7	6.9	4.3	10.8	20.3
ENC	58.4	6.4	2.4	12.2	20.5
WNC	59.2	4.8	2.9	8.9	24.2
MTN	49.2	9.3	7.2	16.6	17.8
PAC	64.7	8.5	2.9	10.3	13.6
Family Income					
0-6,999	48.3	7.2	4.3	12.5	27.7
7,000-11,999	48.8	8.6	5.5	13.8	23.2
12,000-15,999	49.0	8.8	4.0	13.4	24.8
16,000-19,999	54.2	6.2	2.5	13.8	23.2
20,000-24,999	62.8	7.2	2.9	8.0	19.1
25,000-37,999	70.1	6.8	2.5	9.2	11.3
38,000 and up	75.7	5.5	2.4	4.9	11.5

The most precise comparison (because of the sample size) is for white males and females, so that comparison will be discussed first (tables 2-7 and 2-8). But broad generalizations about racial/ethnic differences are difficult to find in those tables. With the exceptions of trade school and military, the match between student and parent aspirations is similar for white males and white females, and it conforms reasonably closely to what one would expect. That is, of those students who expect to earn at least a 4-year college degree, about 90 percent say that their parents expect them to go to college in the year following high school graduation. Conversely, of those expecting only to graduate from high school, only about 20 percent say that their parents expect them to attend college, whereas more than 35 percent say that their parents expect them to get a full-time job. Males are more likely to report that their parents expect them to enter the military. The major difference between white males and white females is in expectations concerning trade schools. Of those white seniors aspiring only to high school graduation, 14.7 percent of males but only 5.5 percent of females say that their parents expect them to attend a trade school. Even among just those white students who say that they expect to attend trade schools, males are much more likely than females to report that their parents, too, expect them to attend trade schools. The proportion for males is nearly double that for females (tables 2-7 and 2-8).

Black females are similar to whites and Hispanics in the proportion among those expecting at least a 4-year degree who say that their parents expect them to attend college. Black males with similar expectations, however, are about 7 percentage points less likely than black females to report that their parents expect them to go to college. Instead, these black males are more likely to say that their parents expect them to work full-time or to attend trade school or to enter the military. A contrasting relationship, in which black parents are more likely than white or Hispanics to aspire to college for their children, emerges among blacks who expect less than a bachelor's degree. In this group there is a greater likelihood for blacks, than for whites or Hispanics with similar expectations, that the parents expect them to go on to college. It is interesting to note that there is also a greater likelihood that the parents of blacks who expect to earn less than a bachelor's degree expect their children to enter the military (tables 2-9 - 2-12).

Changes in Educational Expectations

Seniors

During the 21 months after high school graduation educational expectations change as a result of experiences that are mediated by the individual's background. The simplest way to consider those changes is to group the possible changes into patterns based on the expectations the student held as a senior. We selected 10 combinations of change patterns that are of primary interest and compared their relative frequencies across various personal characteristics. These comparisons are shown in table 2-13.

Across the top the columns identify the 10 patterns of change by the 1980 level of expectations and the 1982 level. The percentages shown in the table refer to the fraction of those having the personal characteristic (such as black male) and initially expecting the 1980 level (e.g., 4-year

Table 2-7--Percent of white male HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	Total	Parents' Aspirations for Students: Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
High school graduate	100.0	18.5	35.4	14.7	5.6	3.7	6.7	15.4
Trade school								
LT 2 years	100.0	20.6	17.6	41.3	1.1	4.5	6.3	8.7
Two or more years	100.0	32.9	5.6	41.3	4.7	2.3	5.1	8.1
College								
LT 2 years	100.0	54.9	12.6	9.0	4.3	5.1	5.3	8.8
Two or more years	100.0	81.2	2.8	2.6	2.4	1.7	1.7	7.6
Bachelor's degree	100.0	86.6	0.6	0.3	0.8	1.5	0.6	9.6
Master's degree	100.0	90.6	0.2	0.1	1.2	0.0	0.6	7.3
Doctorate degree	100.0	88.7	0.7	0.7	1.5	0.0	1.6	6.8

NOTE: Row percentages may not sum to 100 because of rounding.

Table 2-8--Percent of white female HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	Parents' Aspirations for Students							
	Total	Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
High school graduate	100.0	22.3	39.3	5.5	1.5	4.6	7.7	19.2
Trade school								
LT 2 years	100.0	29.8	18.3	28.1	2.9	0.7	8.0	12.2
Two or more years	100.0	48.3	11.2	16.9	4.5	3.1	1.1	15.0
College								
LT 2 years	100.0	74.5	6.9	0.3	1.6	0.0	3.3	13.4
Two or more years	100.0	83.5	4.3	1.6	0.8	0.9	1.6	7.4
Bachelor's degree	100.0	90.1	0.3	0.6	0.5	1.3	0.6	6.6
Master's degree	100.0	90.9	0.2	1.0	0.5	0.7	0.5	6.2
Doctorate degree	100.0	93.5	0.0	0.1	0.0	0.0	0.0	6.4

NOTE: Row percentages may not sum to 100 because of rounding.

college degree) who reported the 1982 level 2 years later. For example, the figure 48.7 under the column headed "4-year degree/Same" means that, among Hispanic males who as high school seniors expected to earn a 4-year degree, 48.7 percent of them expressed the same expectation 2 years later. The figure to the right, 16.2, shows that 16.2 percent of that same group increased their expectations during the 2 years (that is, to the level of graduate education).

These data suggest certain overall patterns of change in expectations. We will see in chapter 3 that these overall patterns reflect closely the degree to which the groups are able to act consistently with their plans or expectations. That is, the same groups that show a lesser likelihood of acting consistently with their expressed educational expectations or a greater likelihood that their plans for education will be frustrated in some way are also those groups that show the greatest likelihood of downward revisions in their educational expectations between the base year and first follow-up.

For example, among males, blacks (54.7 percent) and Hispanics (54.5 percent) are much more likely than whites (43.9 percent) to reduce their expectations of attaining graduate education. Similar but slightly less strong patterns emerge among those males expecting to complete a 4-year degree (33.8 and 32.0 compared to 25.2). Among females, the patterns are similar, although the reduction in expectations of graduate education is much greater for Hispanic females than for others, and the difference between black and white females (5.5 = 54.5 - 49.0) is smaller than that between black and white males (10.8 = 54.7 - 43.9).

Similar patterns of reduced expectations emerge for those students with lower test scores. That is, students in the lowest test quartile are much more likely than others to reduce their expectations of graduate education. Nearly 3 out of 4 in this group who expected to pursue graduate education have reduced their level of expectations 2 years later. In contrast, only a little more than half of those in the middle 2 quartiles and only 38.7 percent of those in the top test quartile show similar reductions in expectations. There is a similar strong pattern for those from higher test quartiles to be less likely than those with lower test scores either to reduce their early expectations of a 4-year degree or to reduce their expectations of some college below the level of the bachelor's degree.

Also consistent with the chapter 3 pattern of being more likely to fulfill expectations is the pattern across curriculum groups. High school students from an academic curriculum are much more likely than others to maintain their expectations of graduate education. They are also much less likely to reduce expectations of a 4-year degree and more likely to raise expectations if as seniors they expected a 4-year degree. General curriculum students are less likely than academic students but more likely than vocational students to maintain or increase their expectations of a 4-year degree or graduate education.

The pattern of changes by socioeconomic background is similar to that for test scores, but differences are not quite as sharply defined and one cannot always be certain that adjacent SES quartiles differ in their behavior. But top and bottom quartiles are clearly different, and the overall impression is that, in terms of expectations for a 4-year degree or graduate education, SES and test score tell much the same story.

Table 2-9--Percent of Hispanic male HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	Parents' Aspirations for Students							
	Total	Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
High school graduate	100.0	19.4	40.8	10.0	3.7	2.6	6.8	16.8
Trade school								12.4
LT 2 years	100.0	22.7	18.1	40.5	2.2	0.0	4.1	
Two or more years	100.0	48.2	14.1	27.7	3.1	1.2	0.8	4.9
College								4.9
LT 2 years	100.0	60.0	10.6	9.0	4.7	0.0	10.9	
Two or more years	100.0	71.1	6.2	3.9	8.1	0.8	4.8	5.2
Bachelor's degree	100.0	86.5	3.0	1.4	1.2	0.6	1.6	5.8
Master's degree	100.0	96.4	0.0	0.0	0.5	0.0	0.0	3.1
Doctorate degree	100.0	92.7	1.7	1.8	1.6	0.0	1.4	0.9

NOTE: Row percentages may not sum to 100 because of rounding.

Table 2-10--Percent of black male HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	Parents' Aspirations for Students							
	Total	Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
High school graduate	100.0	24.1	29.5	10.5	12.8	2.3	6.5	14.3
Trade school								
LT 2 years	100.0	32.0	24.2	23.6	10.9	1.6	1.6	6.2
Two or more years	100.0	43.8	6.8	32.2	9.3	0.0	3.4	4.6
College								
LT 2 years	100.0	52.4	8.2	8.9	3.6	3.5	4.8	18.6
Two or more years	100.0	77.0	4.8	2.6	3.2	0.0	3.4	9.1
Bachelor's degree	100.0	82.7	4.6	0.7	5.8	0.4	0.4	5.4
Master's degree	100.0	83.7	3.0	7.1	1.2	0.7	0.0	4.3
Doctorate degree	100.0	77.3	0.0	5.7	4.4	0.0	2.1	10.6

NOTE: Row percentages may not sum to 100 because of rounding.

It is very interesting that the pattern by family income is not nearly as consistent as that by socioeconomic status. But there appears to be no strong tendency for students from higher income families to be more likely than those from low income families to maintain expectations of graduate education. There is a large difference between the top income category and the four lower income categories in the percentage of reductions in expectations from the level of graduate education. But among those expecting 4-year degrees, there is almost no pattern by family income of differences in propensities to raise, maintain, or lower expectations.

As the reader will see in chapter 3, those students who are less likely to fulfill their educational expectations are also those who are most likely to reduce expectations that may have been above average for their group.

Another pattern within these changes in expectations is important to consider. That pattern is upward revision of expectations among those students who as seniors expected only to graduate from high school. This pattern of change shows a very different relationship to personal characteristics than among those with higher initial expectations. For instance, among males, blacks are much more likely than Hispanics or whites to increase their expectations when initially they expected only to graduate from high school.[7] Black females are similarly more likely than other females to raise their expectations when they initially expected only high school graduation.

Thus, among students who initially expected only high school graduation, blacks, those students from the highest test quartile, those from the highest SES background, and those who took an academic curriculum are similar in having higher expectations 2 years later. But among those who initially expected a 4-year degree or more, blacks were much more likely than the high test or SES quartiles or academic curriculum students to reduce their expectations.

These data suggest that students whose expectations are unusually low (within the high test quartile, high SES quartile, and those taking an academic curriculum) tend to revise their expectations upward. Blacks, however, appear to be more likely than others to hold unstable expectations, either high or low.

Table 2-11--Percent of Hispanic female HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	Parents' Aspirations for Students							
	Total	Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
High school graduate	100.0	28.1	36.4	6.4	2.3	3.6	7.2	16.0
Trade school								
LT 2 years	100.0	35.1	17.3	21.6	1.9	0.0	4.0	20.1
Two or more years	100.0	56.0	10.0	19.5	0.3	0.7	4.6	8.9
College								
LT 2 years	100.0	66.4	17.2	0.3	2.1	1.6	2.9	9.5
Two or more years	100.0	85.7	3.9	0.5	1.1	0.0	2.1	6.7
Bachelor's degree	100.0	87.4	4.4	1.6	0.5	0.6	1.6	4.1
Master's degree	100.0	90.5	3.5	0.4	0.0	0.0	0.0	5.6
Doctorate degree	100.0	88.5	1.3	1.1	0.0	0.0	0.3	8.8

NOTE: Row percentages may not sum to 100 because of rounding.

Table 2-12--Percent of black female HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	Parents' Aspirations for Students							
	Total	Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
High school graduate	100.0	30.0	39.4	6.6	4.5	1.3	3.9	14.4
Trade school								
LT 2 years	100.0	38.6	14.4	32.7	0.8	0.0	3.7	9.8
Two or more years	100.0	53.1	10.0	19.4	3.7	1.5	3.3	9.1
College								
LT 2 years	100.0	78.6	6.6	0.0	0.0	0.0	6.7	8.0
Two or more years	100.0	83.9	4.4	2.1	1.7	0.0	0.5	7.3
Bachelor's degree	100.0	90.3	0.9	1.5	0.6	0.4	1.5	4.7
Master's degree	100.0	92.5	0.9	0.9	0.0	0.0	0.6	5.1
Doctorate degree	100.0	88.6	1.2	2.1	1.6	0.4	1.2	4.9

NOTE: Row percentages may not sum to 100 because of rounding.

Table 2-13--Percent of 1980 HS&B seniors who had the same or different educational expectations in 1982, by selected background characteristics

Characteristic	Expectations 1980	H.S. Grad.	Trade School	Less Than College Degree			College Degree			Graduate School	
	1982	Same	Same	Lower	Same	Higher	Lower	Same	Higher	Lower	Same
Males											
Hispanic		55.1	40.6	35.4	38.4	24.2	33.8	48.7	16.2	54.5	43.7
Black		38.6	47.9	33.7	24.2	38.2	32.0	47.2	18.5	54.7	42.0
White		60.1	39.7	27.3	36.5	31.4	25.2	56.2	16.5	43.9	55.2
Females											
Hispanic		56.1	41.0	39.6	33.8	20.4	33.0	51.0	13.6	62.8	35.7
Black		47.8	48.5	37.6	31.7	27.9	35.6	42.8	20.1	54.5	45.1
White		60.3	40.1	32.4	42.1	19.8	23.4	55.3	18.0	49.0	49.7
Test Quartile											
Low		60.7	42 2	39.7	31.3	23.6	41.6	40.2	12.6	72.6	26.1
2nd		59.7	39.0	35.9	39.0	19.9	34.0	45.6	16.8	55.2	40.0
3rd		59.2	41.8	28.1	42.2	25.9	27.9	55.2	16.5	57.0	41.8
High		36.1	39.7	21.7	41.7	31.6	14.4	62.5	20.4	38.7	61.0
SES Quartile											
Low		63.2	46.0	34.8	33.0	23.8	32.8	49.9	14.1	60.2	38.6
2nd		59.0	38.0	40.7	38.9	13.9	31.5	55.2	9.7	55.0	43.0
3rd		52.3	40.1	30.5	42.1	25.6	27.0	52.9	17.6	52.5	45.7
High		33.9	36.8	20.5	39.5	37.2	18.3	55.4	24.6	40.5	58.9
Curriculum											
General		58.6	39.1	35.5	38.0	19.6	30.7	53.0	12.9	60.3	37.7
Academic		47.2	42.5	23.5	36.8	36.0	19.6	56.3	22.3	42.2	46.8
Vocational		59.0	42.9	36.4	40.9	18.9	45.8	44.6	7.0	76.3	23.6
Region											
NE		49.7	38.5	26.8	49.5	20.3	29.7	51.8	18.2	39.4	59.3
MA		62.9	37.1	27.9	47.4	19.8	23.8	52.8	20.2	39.5	58.5
SA		54.6	40.5	35.5	32.6	24.9	31.7	50.0	17.9	51.7	47.9
ESC		64.4	44.6	35.5	24.1	29.6	27.8	60.6	9.4	56.9	39.3
WSC		53.9	35.9	38.2	33.6	24.5	26.0	50.4	16.8	53.7	45.9
ENC		60.8	43.8	33.3	35.1	27.0	20.6	60.6	17.0	50.3	49.4
WNC		66.5	51.2	35.2	36.8	26.9	19.9	58.5	21.2	55.7	44.1
MTN		51.4	41.0	33.4	40.6	22.2	35.5	51.6	10.7	63.3	32.8
PAC		47.3	31.3	27.5	41.6	25.8	27.8	49.0	18.4	47.4	50.1
Family Income											
0-6,999		60.0	46.1	42.7	24.8	28.9	23.9	59.2	15.1	50.7	47.4
7,000-11,999		56.8	48.2	35.2	35.9	16.4	27.3	55.3	15.2	61.0	38.2
12,000-15,999		60.0	42.2	32.7	39.2	22.3	33.9	46.5	14.4	60.7	38.6
16,000-19,999		63.6	39.3	34.4	44.2	16.7	33.8	52.4	11.5	57.8	41.8
20,000-24,999		56.8	38.4	37.5	36.9	25.1	20.8	57.1	19.2	43.8	52.3
25,000-37,999		52.3	41.5	24.3	38.7	32.4	26.8	52.7	18.8	46.5	52.3
38,000 and up		49.3	34.0	27.1	41.9	28.5	16.8	54.6	26.1	37.5	52.3

NOTE: Missing values included in the base %.

CHAPTER 3

POSTSECONDARY ATTENDANCE

The fundamental indicator of access to postsecondary education is attendance. In this chapter we note that rates of attendance or enrollment immediately following high school graduation have fallen overall over the last decade. We find also, however, that enrollment rates in the second year following high school graduation are more stable now (compared to rates in the first year) than they were a decade ago. One possible interpretation is that prospective students are apparently making more careful decisions now than a decade ago and following through on them more consistently.

Another interpretation is that labor market conditions were more depressed in 1980-81 than in 1972-73, leading students to stay in school more often than they did in 1972-73. At the same time, an important shift in enrollments has occurred that makes females now the majority among those postsecondary students who recently graduated from high school, whereas males were in the majority in 1972-73. These shifts have occurred despite only minor changes in basic relationships between enrollment and such indicators as socioeconomic status, family income, and academic performance.

We find differences by race/ethnicity in rates of enrollment that suggest that although academic performance is the most important factor influencing access, iniquities in access continue into the 1980s. For instance, Hispanics are much less likely than others to apply for postsecondary schools. And although blacks are the most likely to apply, they also have the lowest rates of postsecondary attendance among those who apply.

Attendance depends on both volitional behavior of the individual and acceptance by the institution (including the ability, with or without aid, to finance the cost to the student for the education). Economic and social theories supported by previous research tell us that whether individuals pursue postsecondary education depends on their own educational aspirations and expectations, on factors that influence the likelihood of acting to achieve one's goals, on academic qualifications, and on the financial capacity to meet expenses.

Some of the factors that influence educational expectations were considered in the preceding chapter, including socioeconomic background, academic ability, and family income. Beyond their influence on expectations, one would expect that many of these same factors would be related to attendance because they affect the likelihood of acting to achieve one's goals, are correlated with academic performance, and are correlated with the financial capacity to meet expenses. Thus, these factors are examined in this chapter in their relationship to attendance.

As in the preceding chapter, for each of these topic areas the behavior of the 1980 senior class from the HS&B data is compared, where possible and appropriate, with the behavior of the 1972 senior class. For much of the information discussed here, changes over time are of as much interest as current levels of activity.

Attendance Patterns by Personal Characteristics

Attendance patterns are considered here in four levels of intensity. It is important to distinguish casual from more serious enrollments. Therefore, distinctions are drawn between those people who attended a college or vocational school for at least 6 months (that is, those who attended for at least a full academic year during the nearly 2 years covered by the survey) and those who attended for less time than that. Among those who did not attend a postsecondary school during that time period, those who applied to at least one school are distinguished from those who did not.

Although not presented in a formal table it is worthwhile to consider some general facts about postsecondary attendance. Overall, 59 percent of the sample attend either college or vocational school within the first 2 years after high school graduation. If the cases whose attendance patterns could not be identified are excluded, 64 percent of the sample attend for some period, and 57 percent attend for at least 6 months. Another 7 percent of those with identifiable attendance patterns apply to at least one school but do not attend any school within the 2-year time period.

Racial/Ethnic and Gender-Based Patterns

Racial/ethnic groups differ in rates of attendance, as do males and females (table 3-1). The racial/ethnic differences stand clearly apart from the gender differences. Whites of either gender are 6 to 8 percentage points more likely to attend for at least 6 months than are blacks of the same gender. Blacks of either gender, in turn, are more likely to attend than are Hispanics, with the differences within gender between blacks and Hispanics about the same as those between whites and blacks.

Within each racial/ethnic group, females are from 4 to 6 percentage points more likely than males to attend for at least 6 months, and from 6 to 8 percentage points more likely to attend for any length of time. The differences are quite similar within each of the three major racial/ethnic groups.

Academic Performance, Socioeconomic Background, and Race/Ethnicity

Although these racial/ethnic and gender differences in attendance rates are interesting, there is a basic difference between the racial/ethnic patterns and the gender patterns. Racial differences in attendance rates change substantially when socioeconomic background or academic performance is controlled. The gender differences, in contrast, seem to be fundamental in the sense that they do not disappear when socioeconomic status and academic performance are controlled. Let us consider first the confirmation in these data that attendance rates are higher for students from families with higher socioeconomic status and for students with better academic performance. Then we consider how race/ethnicity, gender, socioeconomic background and academic performance interact and which seem to be more strongly related to attendance rates.

Table 3-1--Percent of HS&B seniors with specified postsecondary attendance and appplication rates, by gender and race/ethnicity

	Attendance and Application Rates							
	(1) Attended LT 6 Months	(2) Attended 6 Months Or More	(3) Any Attendance (1) + (2)	(4) Applied, Did Not Attend	(5) Applied (3) + (4)	(6) Attendance Rate For Applicants [(3)/(5)] x 100	(7) Not Attending (4) + (8)	(8) Neither Apply Nor Attend
All	6.3	50.8	57.1	6.5	63.6	89.8	35.3	28.8
Males								
Hispanic	6.1	36.2	42.3	7.4	49.7	85.1	46.5	39.1
Black	5.6	42.5	48.1	11.2	59.3	81.1	43.2	32.0
White	5.3	50.3	55.6	6.0	61.6	90.3	37.3	31.3
Females								
Hispanic	8.7	40.5	49.2	7.8	57.0	86.3	42.7	34.9
Black	7.1	48.5	55.6	10.7	66.3	83.9	32.3	21.6
White	6.9	54.8	61.7	5.6	67.3	91.7	31.7	26.1

NOTE: Column (7) contains column (4) and those not applying to any postsecondary schools. The difference between 100 and the sum of columns (3) and (7) represents respondents whose attendance patterns could not be determined.

As one would expect, attendance in postsecondary schools is very closely related to the students' socioeconomic background, family income, and academic performance as reflected in composite aptitude test scores (tables 3-2 and 3-3). Moreover, the relationship is quite similar for each of these dimensions of student background. Higher test scores, higher levels of family socioeconomic status, and higher family income are all associated, first, with significantly higher rates of attendance for at least 6 months (tables 3-2 and 3-3, column 2); second, with a higher likelihood of applying (tables 3-2 and 3-3, column 5); and third, with a lesser likelihood of applying but not attending (tables 3-2 and 3-3, column 4). In addition, it is interesting to note that with the exception that the highest test quartile is unlikely to attend for less than 6 months, there is no strong relationship between attending for only a short period and any of these indicators of socioeconomic background or academic performance (tables 3-2 and 3-3, column 1).

The composite test score is a stronger discriminatory of attendance than socioeconomic status, which in turn is stronger than family income. Whether these relative strengths of relationships are real or the result of greater accuracy in measuring aptitudes than SES and SES than income is impossible to say. But if measurement error is not too great, then interesting patterns emerge, as discussed next.

The rates of attendance for at least 6 months range from 27 percent for the lowest to 80 percent for the highest test quartile. The differences between lowest and highest quartiles are smaller for socioeconomic status, 34 percent to 75 percent (table 3-2, column 2). The range is smaller still between the lowest and highest income categories, 37 percent to 70 percent (table 3-3, column 3). For each of these 3 indicators, however, each category has a larger percentage who attend for at least 6 months than does the next lower category. Thus, the relationships are clear and strong, and the indicator that is most directly related to academic performance is also the one most directly related to attendance at postsecondary institutions. It is also likely to be the indicator that is measured most accurately.

If the reservations we have noted concerning measurement problems are not too severe, then these data confirm for 1980-82 what other researchers have found in earlier years about the balance that the American educational system maintains between meritocratic and social status factors in determining access to postsecondary education. Both are important determinants of attendance, but attendance seems to be slightly more sensitive to academic performance than to social status of the family (table 3-4). Within each SES quartile the differences between rates of attendance for at least 6 months is about 40 percentage points between the highest and the lowest test quartiles. For example, among those from families in the lowest SES quartile, only 21.7 percent of those in the lowest test quartile attended postsecondary schools for at least 6 months, whereas 59.7 percent of those in the highest test quartile attended. This percentage (59.7) is higher than that for those students whose families are in the highest SES quartile and who are also in the lowest test quartile (46.4). In contrast, the difference between lowest and highest SES quartiles within each test quartile is only about 28 points. Thus, superior academic performance does permit a substantial percentage of students from even low SES backgrounds to attain access to postsecondary education. But socioeconomic status remains a powerful influence.

Table 3-2--Percent of HS&B seniors with specified postsecondary attendance and appplication rates, by test quartile and SES quartile

	Attendance and Application Rates							
	(1) Attended LT 6 Months	(2) Attended 6 Months Or More	(3) Any Attendance (1) + (2)	(4) Applied, Did Not Attend	(5) Applied (3) + (4)	(6) Attendance Rate For Applicants [(3)/(5)] x 100	(7) Not Attending (4) + (8)	(8) Neither Apply Nor Attend
All	6.3	50.8	57.1	6.5	63.6	89.8	35.3	28.8
Test Quartile								
Low	7.1	27.1	34.2	9.7	43.9	77.9	57.9	48.2
2nd	6.4	44.6	41.0	8.5	49.5	82.8	42.1	33.6
3rd	8.0	60.9	68.9	4.7	73.6	93.6	24.9	20.2
High	3.3	79.6	82.9	4.1	87.0	95.3	10.9	6.8
SES Quartile								
Low	6.7	33.7	40.4	9.4	49.8	81.1	51.8	42.4
2nd	7.1	44.4	51.5	6.6	58.1	88.6	41.4	34.8
3rd	6.3	57.7	64.0	5.7	69.7	91.8	28.7	23.0
High	5.8	75.0	80.8	4.9	85.7	94.3	13.3	8.4

NOTE: Column (7) contains column (4) and those not applying to any postsecondary schools. The difference between 100 and the sum of columns (3) and (7) represents respondents whose attendance patterns could not be determined.

Table 3-3--Percent of HS&B seniors with specified postsecondary attendance and appplication rates, by family income

	Attendance and Application Rates							
	(1) Attended LT 6 Months	(2) Attended 6 Months Or More	(3) Any Attendance (1) + (2)	(4) Applied, Did Not Attend	(5) Applied (3) + (4)	(6) Attendance Rate For Applicants [(3)/(5)] x 100	(7) Not Attending (4) + (8)	(8) Neither Apply Nor Attend
All	6.3	50.8	57.1	6.5	63.6	89.8	35.3	28.8
Family Income								
0-6,999	6.5	36.8	43.3	9.8	53.1	81.5	48.3	38.5
7,000-11,999	8.1	41.6	49.7	8.8	58.5	85.0	42.9	34.1
12,000-15,999	6.7	44.8	51.5	7.8	59.3	86.8	40.8	33.0
16,000-19,999	7.3	46.4	53.7	7.5	61.2	87.8	39.5	32.0
20,000-24,999	6.1	55.8	61.9	4.8	66.7	92.8	30.6	25.8
25,000-37,999	5.4	64.1	69.5	4.8	74.3	93.5	23.3	18.5
38,000 and up	5.3	69.4	74.7	4.5	79.2	94.3	20.2	15.7

NOTE: Column (7) contains column (4) and those not applying to any postsecondary schools. The difference between 100 and the sum of columns (3) and (7) represents respondents whose attendance patterns could not be determined.

Table 3-4--Percent of HS&B seniors with specified periods of postsecondary attendance, by SES quartile and test quartile

SES Quartile	Test Quartile	Postsecondary Attendance					
		Total	LT 6 Months	Six or More Months	Did Not Attend And Did Not Apply	Applied, Did Not Attend	Undetermined
Low	Low	100.0	7.0	21.7	50.8	11.6	8.9
	2nd	100.0	4.5	36.6	43.9	9.4	5.6
	3rd	100.0	9.8	43.8	31.5	6.9	8.0
	High	100.0	5.8	59.7	19.8	7.4	7.4
2nd	Low	100.0	7.7	24.1	52.2	9.1	6.9
	2nd	100.0	5.2	39.0	40.8	6.8	8.3
	3rd	100.0	5.9	54.0	27.8	6.2	6.1
	High	100.0	6.0	75.3	10.0	3.6	5.1
3rd	Low	100.0	7.7	34.0	47.4	4.6	6.3
	2nd	100.0	8.1	45.9	28.3	10.1	7.6
	3rd	100.0	8.4	64.3	16.9	3.6	6.7
	High	100.0	2.2	80.7	4.3	4.9	7.8
High	Low	100.0	6.6	46.4	25.0	12.2	9.8
	2nd	100.0	9.5	64.8	12.8	7.1	5.8
	3rd	100.0	8.3	77.1	7.5	2.8	4.3
	High	100.0	2.1	85.7	4.0	2.9	5.4

NOTE: Details may not sum to 100 because of rounding.

Racial/ethnic differences in attendance rates are much less clear when socioeconomic status or academic performance is controlled than when they are not. This result suggests that the socioeconomic or academic influences are, in some sense, fundamentally more important in determining access than are other factors not identified separately here that also vary with race/-ethnicity. This pattern agrees with those references cited in chapter 1 that find that racial/ethnic differences disappear or are even reversed when SES and aptitude are controlled. In contrast, the gender differences remain rather clear when SES or test scores are controlled. Let us illustrate.

Among males in the top half on the aptitude tests, there are no significant differences by race/ethnicity in rates of attendance for at least 6 months (table 3-5). Whites and Hispanics in the lower half on the test also show no substantial differences in attendance rates. However, blacks in the lower half on the test are more likely than whites or Hispanics to attend for at least 6 months. That black males with below average test scores have higher attendance rates than whites with similar scores, and that white males nevertheless have higher overall attendance rates (table 3-1, column 3) than black males implies that black males have lower average test scores than whites. The difference in attendance rates between high and low scorers on the test dominates the racial/ethnic differences within test levels in determining access.

Black females usually are more likely to attend for at least 6 months than are either white or Hispanic females. There are two exceptions. Hispanic females have a higher attendance rate in the third quartile. Also, in the highest test quartile, the difference between white and black females is not large enough to be statistically significant. Although there are differences from quartile to quartile between white and Hispanic females, the figures suggest that if the two lower quartiles were combined (not shown), attendance rates of white and Hispanic females scoring in the lower half of the test range would be nearly equal. A similar relationship exists for the upper half of the test range. As with males, the lower overall attendance rate for black females compared to white females indicates the dominance of differences in attendance rates by test scores over racial/ethnic differences (table 3-5).

Gender differences within race while controlling for test quartile are rather simple and systematic, resembling the overall pattern of gender differences discussed above. Generally, females in any race/ethnicity group are more likely to attend for 6 months or more than males (when males and females with scores in the same test quartile are compared). The exception is among Hispanics in the top test quartile. Most of the differences are statistically significant (table 3-5).

When socioeconomic status is controlled, the race/ethnicity differences stand out less sharply. Whites attend more often than blacks in the same SES quartile only for two quartiles for males and two for females (table 3-6) Nor do blacks always attend more frequently than Hispanics. The relative attendance rates show different patterns from one SES quartile to another. Despite some minor qualifications, however, overall patterns for attendance by SES alone emerge for each race/gender group as it is considered separately. For white and Hispanic males and for black and white females, higher SES goes hand-in-hand with higher rates of attendance for at least 6 months. The exceptions are black males and Hispanic females. Black males from families in the third SES quartile are more likely than those in the highest SES quartile to attend for at least 6 months. Also Hispanic

Table 3-5--Percent of HS&B seniors with specified postsecondary attendance, by gender, test quartile, and race/ethnicity

Gender	Test Quartile	Race/ Ethnicity	Total	Postsecondary Attendance: LT 6 Months	Six or More Months	Did Not Apply	Applied, Did Not Attend	Undetermined
Males	Low	Hispanic	100.0	6.0	20.0	53.8	9.8	10.4
		Black	100.0	4.8	31.2	43.1	11.7	9.2
		White	100.0	6.1	20.1	59.8	8.1	6.0
	2nd	Hispanic	100.0	5.7	40.7	34.9	8.0	10.6
		Black	100.0	7.7	53.2	21.1	11.2	6.8
		White	100.0	6.5	36.6	41.8	7.7	7.5
	3rd	Hispanic	100.0	7.8	59.2	18.9	4.7	9.4
		Black	100.0	6.3	59.8	11.5	12.3	10.0
		White	100.0	5.7	58.7	24.0	4.8	6.7
	High	Hispanic	100.0	5.5	76.6	9.4	.2	8.4
		Black	100.0	7.2	79.2	2.6	.2	10.8
		White	100.0	2.9	76.6	8.2	5.7	6.6
Females	Low	Hispanic	100.0	9.6	30.6	38.8	12.5	8.5
		Black	100.0	8.9	40.8	28.2	12.7	9.4
		White	100.0	7.3	24.9	52.7	8.0	7.1
	2nd	Hispanic	100.0	9.8	43.6	35.3	6.6	4.7
		Black	100.0	3.7	58.5	11.9	14.0	11.9
		White	100.0	6.2	48.4	31.4	8.3	5.6
	3rd	Hispanic	100.0	4.8	73.2	11.0	4.2	6.7
		Black	100.0	5.7	69.7	5.0	6.7	12.9
		White	100.0	10.6	61.1	19.1	4.1	5.1
	High	Hispanic	100.0	8.4	74.8	6.7	2.2	7.9
		Black	100.0	3.6	83.7	4.1	4.4	4.2
		White	100.0	3.2	83.0	5.6	2.8	5.4

NOTE: Details may not sum to 100 because of rounding.

Table 3-6--Percent of HS&B seniors with specified postsecondary attendance, by gender, SES quartile, and race/ethnicity

Gender	SES Quartile	Race/ Ethnicity	Total	Postsecondary Attendance: LT 6 Months	Six or More Months	Did Not Apply	Applied, Did Not Attend	Undetermined
Males	Low	Hispanic	100.0	6.4	28.6	45.3	10.2	9.5
		Black	100.0	6.4	34.7	39.5	11.1	8.3
		White	100.0	5.2	30.7	49.7	7.7	6.8
	2nd	Hispanic	100.0	5.2	36.6	34.6	9.3	14.4
		Black	100.0	6.0	40.2	32.7	12.0	9.0
		White	100.0	5.3	41.1	40.9	6.1	6.5
	3rd	Hispanic	100.0	4.0	50.5	35.1	1.9	8.5
		Black	100.0	6.4	59.2	16.9	6.1	11.4
		White	100.0	5.7	51.7	28.9	6.9	6.8
	High	Hispanic	100.0	9.6	63.2	18.2	2.3	6.9
		Black	100.0	11.8	54.8	10.3	11.5	11.6
		White	100.0	4.4	72.5	11.1	5.2	6.8
Females	Low	Hispanic	100.0	7.8	30.5	40.5	11.8	9.4
		Black	100.0	7.7	43.4	24.6	12.8	11.5
		White	100.0	7.4	32.7	45.9	7.9	6.1
	2nd	Hispanic	100.0	9.6	51.5	28.1	3.3	7.6
		Black	100.0	4.7	55.4	15.2	12.6	12.1
		White	100.0	8.7	46.1	33.7	5.5	5.9
	3rd	Hispanic	100.0	14.2	45.4	25.4	7.1	8.0
		Black	100.0	6.5	58.5	14.1	10.8	10.1
		White	100.0	6.6	64.5	17.5	4.2	7.1
	High	Hispanic	100.0	4.4	81.3	7.7	4.2	2.5
		Black	100.0	10.3	71.1	7.1	7.0	4.7
		White	100.0	6.7	79.1	5.2	4.3	4.7

NOTE: Details may not sum to totals because of rounding.

females in the second quartile are more likely to attend for at least 6 months than are those in the third quartile. In both cases, however, if one were to combine attendance rates for more than 6 months with those of less than 6 months, the combined attendance rates between the two SES quartiles in question would be about equal. For black males the rates would be 65.6 (= 6.4 + 59.2) for the third quartile and 66.6 (= 11.8 + 54.8) for the top quartile. For Hispanic females, the corresponding figures for the second and third quartiles would be 61.6 (= 9.1 + 51.5) and 59.6 (= 14.2 + 45.4), respectively. Thus, the overall patterns tend to be maintained.

Socioeconomic status has a stronger association with attendance of whites or Hispanics of either gender than with attendance of blacks. Whites or Hispanics from the highest SES families are at least 30 percentage points and sometimes 50 percentage points more likely to attend for at least 6 months than are whites from the lowest SES families. For black females the corresponding difference is only 28 points, and for black males it is only 20 points. Because blacks are more likely than whites to attend for less than 6 months, the gap between high and low SES enrollment rates for any length of time is less among racial/ethnic groups than is the gap for enrollment rates for at least 6 months, but they remain substantial. Those gaps would be 41.0 (= [4.4 + 72.5] - [5.2 + 30.7]) for white males, 37.8 (= [9.6 + 63.2] - [6.4 + 28.6]) for Hispanic males, and 25.5 (= [11.8 + 54.8] - [6.4 + 34.7]) for black males.

Changes Over Time

To understand whether the relative importance of these factors has changed over the last decade, we compare the relationships revealed by the Class of '72 data with those just discussed. Such comparisons are complex because there are several dimensions to the comparison, and we must be careful not to confuse change in one dimension with change in another. Before continuing with the status, income, and ability comparisons, therefore, we will digress a bit to consider how these dimensions of change fit together. The easiest way to understand this is to compare attendance rates for males and females.

The timing of the interviews for HS&B gives 21 months of enrollment information. Unfortunately, that time span is not long enough in most cases to expect that people will have completed educational programs. Thus, we are limited to noting whether people initiated educational programs. Also, because we have 21 months of data for HS&B and several years for NLS '72, we can offer several answers to the question of whether people initiated programs more often in 1972-73 than in 1980-81. If each of the several approaches gave the same answer, the choice would make little difference. But the answers are not the same, and we must understand why they differ in order to make intelligent comparisons between 1972-73 and 1980-81.

Figure 1. Time lines showing corresponding points in the life cycles of NLS '72 and HS&B respondents.

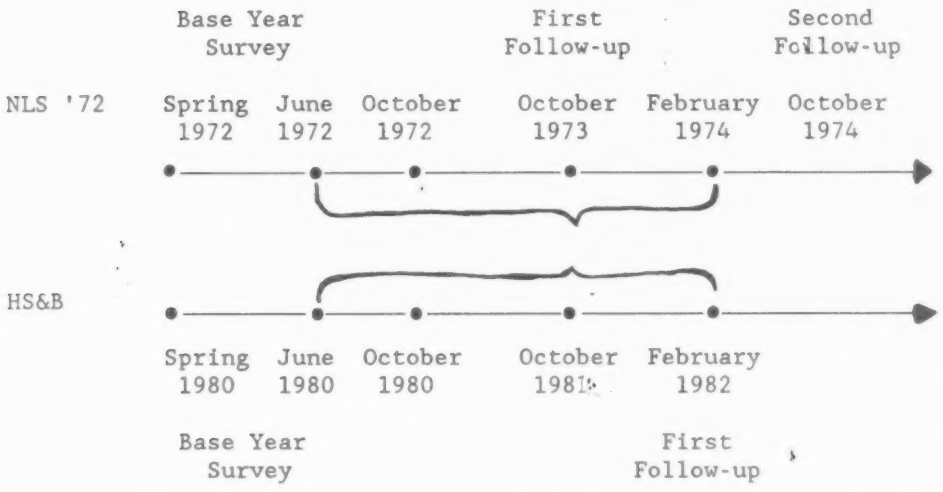

Figure 1 may help to illustrate the problems. It shows the timing of the NLS '72 and HS&B surveys, arrayed so that points that are directly above or below each other represent the same relative points in the life cycles of each cohort. For example June 1980 is the typical high school graduation month for most seniors in the HS&B survey. The corresponding time for NLS '72 is June 1972. Similarly, the Octobers of 1980 and 1972 show for HS&B and NLS '72, respectively, the start of the first academic year for most students who would attend postsecondary schools.

We could compare the fractions of new high school graduates enrolled in postsecondary programs at the first October following their high school graduation (1972 and 1980 for NLS '72 and HS&B, respectively). We could make a similar comparison at the second October (1973 and 1981). We could compare the fraction of people enrolled at some time over the first year and a half following high school graduation (the bracketed ranges shown in figure 1). Or we could compare the fractions of people enrolled for some minimum period of time within that span (that is, the bracketed ranges).

The last of these comparisons is probably the best, because it differentiates between purposeful, continuous attendance and some, but not all, patterns of casual attendance. Unfortunately, because complete enrollment information is not collected consistently in NLS '72, it is not possible to create complete enrollment histories for the period June 1972 - February 1974 with nearly as much confidence as it is for the period June 1980 - February 1982. Thus, we are limited to comparing October 1972 with October 1980 and October 1973 with October 1981. These are the comparisons shown in table 3-7.

Among these other comparisons, three patterns stand out. First, both males and females show higher enrollment rates at the first October after high school graduation than at the second. That is, net attrition in enrollment takes place between the first and second Octobers following high school graduation. It occurred in both 1972-73 and in 1980-81. In 1980-81, the attrition is much smaller for males than for females, and we will have more to say about that later.

Table 3-7--Percent of HS&B and NLS '72 students attending a postsecondary school at specified times, by selected background characteristics

Characteristics	October 1980	October 1981	October 1972	October 1973
Hispanic			46.8	35.6
Males	36.2	38.9	---	---
Females	43.5	36.6	---	---
Black			49.8	40.3
Males	43.5	40.4	---	---
Females	50.6	48.1	---	---
White			56.4	47.2
Males	52.2	50.0	---	---
Females	57.4	52.2	---	---
All				
Males	50.1	48.4	55.6	48.1
Females	55.6	50.7	54.4	44.0
Test Quartile				
Low	26.9	25.4	31.5	22.7
2nd	45.3	41.4	54.2	44.5
3rd	65.9	58.6		
High	81.6	79.0	79.7	72.6
SES Quartile				
Low	34.8	31.3	35.5	27.3
2nd	46.0	42.1	52.9	43.8
3rd	60.1	55.5		
High	78.1	75.8	80.4	71.5
Family Income				
0-6,999	38.4	35.9	---	---
7,000-11,999	43.4	39.0	---	---
12,000-15,999	46.3	39.6	---	---
16,000-19,999	49.4	44.9	---	---
20,000-24,999	58.7	54.4	---	---
25,000-37,999	64.7	63.4	---	---
38,000-and up	70.5	68.2	---	---

NOTE: Data for NLS '72 is taken from Fetters, Dunteman, and Peng (1977) table 3. The figures for attendance for NLS '72 are the sum of attendance percentages for vo-tech, 2-year college, and 4-year college, both those students who only attended school and those who attended school and worked.

Second, for males, October 1972 attendance rates are higher than October 1980 rates, while October 1973 rates and October 1981 rates are about the same. The 1972 and 1980 comparison suggests that males are enrolling in postsecondary programs much less often now than they were a decade ago. But that impression is misleading unless one considers also that, by the second October following high school graduation, the percentage of males enrolled is about the same in 1980-81 as it was in 1972-73. These comparisons contain some important substantive information: although the level of initial enrollments by newly graduated males is lower in 1980-81, the apparent fraction of males with educational plans that are firm enough to keep them in school beyond 1 academic year is about the same now as it was a decade earlier. That is, although initial enrollments are less frequent now, the base of more stable enrollments among newly graduated males is just about as firm now as it was a decade ago.*

Third, in contrast to the males, for females the 1980 and 1972 rates are about the same, while the 1981 rate is higher than that for 1973. These data suggest that the base of more stable enrollments is higher now for females than it was in 1972-73. This increased stability of enrollment also receives some support from data on continuation rates by type of institution (see chapter 4).[8]

The point in making these comparisons is that, when one period in the comparison (such as 1972-73) is represented by more than one point in time, the comparison may be complicated because of variations within the time period. Such variations need not be important if they are small. But in this case, the year-to-year variations are important, even though the period-to-period variations are larger.

With the preliminary illustration now behind us, we can return to the issue of merit vs. privilege. Notice that the reduction in initial rates of attendance between 1972 and 1980 is sharper among lower aptitude students than among those of higher aptitude. The attendance rate for October 1972 for the lowest test quartile is five points above the lowest quartile for October 1980. In contrast, the middle quartiles had attendance by about 54 or 55 percent of its members in both 1972 and 1980 (average of 45.3 and 65.9 is about 55). For the highest quartile, about 80 percent of students attended in the first October in both 1972 and 1980. This pattern is encouraging to educators if it means that fewer unqualified students are attending. But it is discouraging if it implies that low-performing students who have the potential to succeed were less likely in 1980-81 than 1972-73 to experiment by enrolling in a postsecondary institution.

The contrast between the first and second year's enrollment rates may help to distinguish between these interpretations. Enrollment rates in 1980-81 show much less attrition than in the 1972-73 period. But the patterns are particularly interesting. They suggest, first, that although high aptitude students enrolled at about the same rates in 1972 and 1980, a substantially larger proportion were enrolled in October 1981 than in October 1973. Since most of those enrolled in the second October were also enrolled in the first October (although we do not have the exact rates of overlap within test quartiles), these data suggest that high aptitude students experience less attrition in enrollment now than they did a decade ago. Students in the middle quartiles also show less attrition. Finally, the lowest test quartile experienced substantial attrition between 1972 and 1973. The lower rate in 1973 was about the same (lower but not

statistically significantly so) as in 1981, which was only a slight reduction (not statistically significant) from 1980. These data seem to suggest that higher aptitude students are more likely now than in the early 1970s to continue their postsecondary education beyond the first year and that lower aptitude students were less likely now than they were a decade ago to enter postsecondary education without continuing into the second year.[9]

The differences in enrollment rates between 1972 and 1980 show patterns across SES levels roughly similar to those across test quartiles. In the SES stratification the highest quartile shows reduction in attendance of about 2 percentage points (80.4 - 78.1) between 1972 and 1980 and about 4 percentage points (75.8 - 71.5) between 1973 and 1981. The middle quartiles are about the same in 1972 and 1980, since 46.0 and 60.1 average out to 53. Between 1973 and 1981 the middle quartiles show a slight drop, since 42.1 and 55.5 average out to about 48. The difference between SES and test quartiles is in the lowest quartile, where there is essentially no difference between 1972 and 1980, contrary to the pattern for the lowest test quartile.

Equity in access by race/ethnicity and gender may now be interpreted in light of these findings regarding income, status and ability. Consider first the differences by gender. Within each racial/ethnic group, females are from 4 to 6 percentage points more likely than males to attend for at least 6 months, and from 6 to 8 percentage points more likely to attend for any length of time (table 3-1). The differences seem to be fundamentally related to gender roles and attitudes because they are quite similar within each of the three major racial/ethnic groups; (table 3-8) in only one quartile (the third) do they disappear when one controls for socioeconomic background or academic ability; and changes in enrollment patterns over the last decade coincide with changes in attitudes regarding gender roles.

The existence in 1980-81 of gender differences across racial/ethnic groups and across levels of socioeconomic background and academic performance is relatively straightforward and easy to see (table 3-8). In only three instances in that table are males' rates of attendance higher than females'. These are shown by the three negative entries in table 3-8. The fact that between 1980-81 and 1972-73 females' base of continuing enrollment rose whereas that rate for males remained about the same has already been noted.

We have also noted that females had higher rates of attend ance in 1980-81 than did males. The majority of <u>new high school graduates who attend postsecondary institutions shortly after graduation</u> are now females, whereas a decade ago the majority were men.

<u>Interaction of Student Ability and Parental Income</u>

Theories of educational choice and previous empirical studies suggest that student ability and parental income interact in affecting college enrollment. It is clear from the "totals" column in table 3-9 that the likelihood of an individual attending for at least 6 months increases steadily with higher family income. In table 3-2 we have already seen that enrollment rates are higher in higher test quartiles. As noted in the earlier discussion of income and academic performance alone, attendance rates are more responsive to changes in academic performance than to

Table 3-8--Differences in percent for males and females who attended a postsecondary school for at least six months, by selected background characteristics

Characteristics			Female rate - Male rate
Hispanic			4.3
Black			6.0
White			4.5
Hispanic	Low	Aptitude Quartile	10.6
	2nd		2.9
	3rd		14.0
	High		-1.8
Black	Low		9.6
	2nd		5.3
	3rd		9.9
	High		4.5
White	Low		4.8
	2nd		11.8
	3rd		2.4
	High		6.4
Hispanic	Low	SES Quartile	1.9
	2nd		14.9
	3rd		-5.1
	High		18.1
Black	Low		8.7
	2nd		15.2
	3rd		-.7
	High		16.3
White	Low		2.0
	2nd		5.0
	3rd		12.8
	High		6.6

SOURCE: Derived from tables 3-1, 3-2, 3-3, 3-4, 3-10, 3-11.

NOTE: Standard errors are shown for levels in original tables.

Table 3-9--Percent of HS&B seniors with specified test scores, by family income and attendance

Family Income	Test Quartile				
Attending 6 months or more	Low	2nd	3rd	High	Total
0-6,999	23.6	43.7	53.1	71.8	37.2
7,000-11,999	24.3	39.3	59.0	73.1	43.2
12,000-15,999	28.2	44.4	48.7	70.8	46.9
16,000-19,999	22.8	38.2	52.4	78.3	47.0
20,000-24,999	26.8	43.9	66.4	79.9	56.2
25,000-37,999	30.5	52.3	69.1	81.1	63.2
38,000 and up	37.2	61.5	69.9	87.7	70.3

Family Income	Test Quartile				
Applying or Ever Attending	Low	2nd	3rd	High	Total
0-6,999	44.4	57.0	68.0	79.2	54.1
7,000-11,999	46.2	52.0	69.5	86.0	58.8
12,000-15,999	44.4	59.2	64.8	81.6	61.6
16,000-19,999	39.2	57.1	68.7	85.6	62.0
20,000-24,999	42.2	54.6	76.1	86.5	66.5
25,000-37,999	42.0	66.9	80.6	88.0	73.9
38,000 and up	48.2	77.1	80.1	92.7	79.7

changes in family income. Table 3-9 shows that within every income level, higher test quartiles have higher rates of attendance, and the differences in moving from one test level to another are usually statistically significant. In contrast, when test is controlled, only among the top four income categories are steady increases in attendance rates noticeable as one moves to successively higher income levels. There is not a consistent overall pattern for successively higher incomes to produce higher attendance rates. For example, within the low test quartile, the attendance rate is higher (28.2 percent) in the $12,000-$16,000 range than in the range below $7,000. But the 28.2 percent rate is higher also than rates in the $16,000-$20,000 and $20,000-25,000 ranges and is only 1.7 percentage points below the rate for the $25,000-$38,000 range.

There emerges here a stronger relationship between attendance and academic performance than between attendance and either income or SES. It is also true, however, that students from high SES or high income families tend to score higher on academic performance tests (see for example, Campbell, Gardner, and Winterstein 1984). Nevertheless, these results suggest that attendance in postsecondary education is much more heavily contingent on academic performance than on either family income or socio-economic status. Even though attendance rates increase with income, being in the top income bracket shown here does not give a person in the lowest test quartile a higher chance of attending than for a person testing in the second quartile whose family is in the lowest income bracket. Similarly, most students scoring in the third test quartile have higher likelihoods of attending than any students testing in the second quartiles, regardless of family income. In five of seven income categories, attendance in the third quartile is higher than attendance for any income level in second quartile, except the highest. In only one income level (12,000-15,999) is the third test quartile lower than attendance for the second quartile in the two highest income categories. The relationship is even stronger for the highest and next to highest test quartiles. Overall, therefore, the data suggest that income is important but academic performance tends to be more important in determining access.

The question has been raised in the last several years that ease of access may not increase in a simple fashion with family income. That is, some observers have suggested that with current aid and scholarship programs, it may be easier for either low or high income families to send their children to postsecondary schools than it is for middle income families. That pattern does not stand out clearly from these data, but there is a hint that the suspicion may be warranted. Overall, the income-attendance relationship shows steady increases in attendance rates as income increases. But within each test quartile there is a dip in the attendance rate at some middle income range. That the dip occurs at different income ranges for each quartile tends to mask the relationship when only income and attendance are considered. For example, in the two lower test quartiles, the dip comes in the $16,000-$20,000 range. In the two higher test quartiles, however, the dip occurs in the $12,000-$16,000 range.

Table 3-10--Percent of HS&B seniors with specified postsecondary attendance and application rates, by curriculum

	Attendance and Application Rates							
	(1) Attended LT 6 Months	(2) Attended 6 Months Or More	(3) Any Attendance (1) + (2)	(4) Applied, Did Not Attend	(5) Applied (3) + (4)	(6) Attendance Rate For Applicants [(3)/(5)] x 100	(7) Not Attending (4) + (8)	(8) Neither Apply Nor Attend
All	6.3	50.8	57.1	6.5	63.6	89.8	35.3	28.8
Curriculum								
General	8.1	42.5	50.6	7.7	58.3	86.8	43.6	36.9
Vocational	7.0	30.8	37.8	5.3	43.1	87.7	53.1	47.8
Academic	4.5	76.2	80.7	7.4	88.1	91.6	12.6	5.2

NOTE: Column (7) contains column (4) and those not applying to any postsecondary schools. The difference between 100 and the sum of columns (3) and (7) represents respondents whose attendance patterns could not be determined.

High School Curriculum Patterns

As is the case with other studies (see citations in chapter 2), the HS&B data show that choice of high school curriculum is closely related to attendance rates in postsecondary education (table 3-10). However, this finding requires cautious interpretation. Students who choose an academic curriculum are likely to make that selection in anticipation of attending a postsecondary institution. In contrast, a vocational curriculum is designed particularly to serve those students who do not plan to pursue higher education. Assessing the effects of different types of high school curriculum on subsequent educational attainment is therefore quite difficult, because some correlation of curriculum choice with educational aspirations would exist even if curriculum itself were known to have no objectively specifiable, independent impact on educational attainment.

It is no surprise, then, to find that academic curriculum students are far more likely than general curriculum students to attend postsecondary institutions. General curriculum students, in turn, are more likely to attend than vocational students. Whereas nearly half of vocational students (47.8 percent [53.1 -5.3]) never applied to a postsecondary institution, only slightly more than one-third (35.9 percent [43.6 - 7.7]) of general curriculum students and less than one-tenth (5.2 percent [12.6 - 7.4]) of academic curriculum students did not apply to at least one school (these percentages are compiled from table 3-10). These results are consistent with the literature cited in chapter 1.

Geographic Patterns of Attendance

Regional differences in the types of schools available to students, their geographic proximity, and attitudes toward higher education are apparently closely related to attendance and application rates for postsecondary schools (table 3-11). The Pacific, North Central (ENC and WNC), and the Northeast regions are most likely to have students attend for at least 6 months. This finding is consistent with most of the studies cited in chapter 2. In addition, the Pacific region is far more likely than any other region (except the Mountain States) to have students attend less than 6 months. It is also far less likely to have students apply but not attend.

Enrollment rates are lower in most regions of the country in 1980 than in 1972, though simple comparisons are hampered because Class of '72 readily identified only four regions, whereas HS&B identified nine. Combining the nine regions into four shows that enrollment rates in three of the four regions declined between 1972 and 1980 (table 3-12). The most obvious change over the period is in the relative rates of enrollment in the North Central and South regions. In October 1972, the estimated enrollment rates in those two areas were virtually the same. By October 1980 enrollment rates in the South were anywhere from 2 to 10 percentage points below those in the two North Central regions. But other changes were occurring as well. The West and Northeast had substantially higher attendance rates in 1972 than in other regions. But by 1980 the West North Central region exhibited the highest rate. (Note that these regions are those of the student's home while in high school, not necessarily the region in which students attend college.

Table 3-11--Percent of HS&B seniors with specified postsecondary attendance and application rates, by region

	Attendance and Application Rates							
	(1) Attended LT 6 Months	(2) Attended 6 Months Or More	(3) Any Attendance (1) + (2)	(4) Applied, Did Not Attend	(5) Applied (3) + (4)	(6) Attendance Rate For Applicants [(3)/(5)] x 100	(7) Not Attending (4) + (8)	(8) Neither Apply Nor Attend
All	6.3	50.8	57.1	6.5	63.6	89.8	35.3	28.8
Region								
NE	4.9	53.8	58.7	7.2	65.9	89.1	31.9	24.7
MA	6.2	49.9	56.1	7.0	63.1	88.9	36.2	29.2
SA	6.4	47.3	53.7	8.6	62.3	86.2	38.2	29.6
ESC	4.9	49.0	53.9	6.5	60.4	89.2	39.5	33.0
WSC	6.1	44.9	51.0	6.8	57.8	88.2	41.6	34.8
ENC	5.0	52.7	57.7	6.1	63.8	90.4	34.7	28.6
WNC	4.2	56.7	60.9	5.7	66.6	91.4	33.3	27.6
MTN	10.9	39.4	50.3	10.4	60.7	82.9	43.4	33.0
PAC	8.9	56.6	65.5	2.9	68.4	95.8	26.5	23.6

NOTE: Column (7) contains column (4) and those not applying to any postsecondary schools. The difference between 100 and the sum of columns (3) and (7) represents respondents whose attendance patterns could not be determined.

Table 3-12--Percent of HS&B and NLS '72 students attending a postsecondary school at specified times, by region

Region	October 1980	October 1981	October 1972	October 1973
NE	56.8	55.0	56.6	49.5
MA	51.8	50.4		
SA	49.9	46.9		
ESC	51.1	47.3	53.0	43.2
WSC	48.6	41.6		
ENC	53.8	50.8	53.7	45.0
WNC	59.2	53.2		
MTN	43.4	35.6	57.6	47.5
PAC	57.7	55.9		

NOTE: Data for NLS '72 is taken from Fetters, Dunteman, and Peng (1977) table 3. The figures for attendance for NLS '72 are the sum of attendance percentages for vo-tech, 2-year college, and 4-year college, both those students who only attended school and those who attended school and worked.

Differences in Application and Attendance Rates

In identifying factors associated with enrollment, we may consider what types of students planned to enroll but did not. The HS&B data permit us to identify plans with aspirations or expectations or with applications to schools. The matching of expectations and actions are considered in chapter 4. At this point we consider that applying to a school indicates interest in further education.

This issue can be approached in both absolute and relative terms. That is, one can ask, first, which groups have the highest absolute rates of applying to schools but not attending. That figure is shown in column (4) in table 3-1, 3-2, 3-3, 3-10, and 3-11. One can ask, second, among those students who apply to at least one school, which groups have the lowest fractions attending. This figure is shown in column (6) in tables 3-1, 3-2, 3-3, 3-10, and 3-11. The data suggest that each group does not present identical responses to both questions.

Perhaps the best illustration that the information from the two perspectives need not coincide is provided when respondents are stratified by high school curriculum (table 3-10). The highest absolute rates of applying but not attending (column [4]) come from the general curriculum group, although that groups' rate is not significantly different from the academic curriculum rate. The lowest rate is for vocational curriculum students. If one is concerned with relative "success" rates in applications and interprets low rates of applying but not attending as indicators of success, the vocational students would appear to be the most successful. However, if one interprets success (probably more appropriately) as the fraction of those who apply to postsecondary schools who actually attend (column [6]), then academic curriculum students are by far the most successful curriculum group, and vocational students are slightly less successful than general curriculum students.

When respondents are grouped by academic performance (table 3-2), socioeconomic status (table 3-2), family income (table 3-3), and region (table 3-11), the absolute (column [4]) and relative measures (column [6]) tell similar stories. The story is usually that those groups most likely to apply but not attend are also those with the highest percentage of applicants not attending. They are also the groups with the lowest rates of applying (column [5]). Thus, the lowest test quartile is five times more likely to have an applicant not attend than is the highest test quartile; it is twice as likely to have a person apply but not attend, and it is seven times more likely (column [8]) to have a person never apply. Similarly, the lowest SES quartile is four times more likely than the highest to have a person not apply (column [8]) and twice as likely to have a person apply but not attend (table 3-2). Family income categories exhibit a similar tendency for lower rates of attendance among applicants at lower income levels (table 3-3). Finally, the Pacific region has the highest rate of attendance among applicants and the Mountain region has the lowest rate (table 3-11).

The contrast between blacks and Hispanics reflects the divergence in educational expectations of these groups that was discussed in chapter 2. Blacks generally have higher educational expectations than do Hispanics, and these data on rates of attendance among applicants suggest that these expectations are unrealistically high for at least some black respondents.

The distinction between those who applied to schools but did not attend any school (column [4]) and those who never applied (column [8]) is consistent with the differences in educational expectations among racial/ethnic groups. This distinction shows clearly the need for policy to influence attitudes and aspirations of prospective students if it expects to influence college-going behavior of young people. Hispanics are substantially less likely than either blacks or whites to apply to post-secondary schools. The difference ranges from 8 points for males to 9 to 14 points for females (table 3-1). Blacks are almost twice as likely as whites to apply to postsecondary institutions but not attend within the first 2 years following high school graduation. These findings are consistent with differences in educational expectations reported in chapter 2. Hispanics have consistently lower educational expectations than do the other major racial/ethnic groups. Blacks expect to attain at least as much education as whites.

CHAPTER 4

TYPE OF SCHOOL AND PROGRAM SELECTED

This chapter examines several decisions made by those who attend postsecondary institutions. The types of schools (4-year, 2-year, or vocational, public or private, in-state or out-of-state) attended are compared with the background characteristics of the students who attend in order to gain further insight into both the degree to which equity extends to types of institutions attended and the influence of personal characteristics on the types of institutions attended. A similar comparison is made for full-time and part-time enrollments. Both types of tabulations are especially important for judging whether and to what extent predicted shifts in enrollment among types of institutions have already begun. The tabulations can show whether any shifts that have been predicted have occurred (or failed to occur) among the groups that were expected to give rise to them or whether shifts have occurred (or failed to occur) because of unanticipated behavior by other groups. They can also indicate the extent of enrollment in 2-year institutions by students who aspire to bachelor or higher level degrees and the race/gender patterns of such enrollments. These rates of attendance are relevant to assessing the scope of the problem of students who aspire to 4-year degrees who might be less likely to attain them because of attendance at 2-year institutions.

This chapter also examines the academic fields in which new students enroll and permits one to compare enrollments by field in 1980-81 with those in 1972-73. That comparison gives some insight to whether the National Commission on Excellence in Education was correct in its conclusion that students today are taking less-demanding courses than their predecessors did a decade ago. It also shows the extent to which students are pursuing technical fields and those subject areas that may contribute to economic growth and to meeting foreign economic competition. (These data must be treated with great caution, both because the interpretation that some fields are more likely than others to contribute to economic growth is open to question and because students often change their fields before they graduate.)

This analysis finds a significant racial/ethnic pattern associated with the fulfillment or frustration of plans in the fact that the fractions of blacks and Hispanics who plan as seniors to take academic courses at college but do not is nearly twice as large as the fraction for whites. Our data suggest that this frustration of plans for study at 4-year colleges or universities is not mitigated by a spillover of blacks and Hispanics to 2-year schools. The data further suggest that females and those who plan to attend 4-year colleges are relatively more successful than others in later acting consistently with those plans.

The same factors that are closely related to whether a person attends any postsecondary school are also related to the choice of type of institution. Although all students are more likely to attend public institutions than private ones, whites are relatively more likely than others to attend private universities. Hispanics are more likely than blacks or whites to attend 2-year institutions, and vocational schools are more likely to draw students from the lower ranges of SES and academic performance.

We find that prospective students from traditionally disadvantaged groups express attitudes and concerns that reflect those disadvantages. For most prospective students, academic characteristics of the school are more important in selecting a school than are financial demands or social opportunities or proximity of the school to one's home. But females are more likely to consider expenses and aid to be important than are males. And financial aid or expenses are of greater concern to blacks than to Hispanics, and of more concern to Hispanics than to whites. Overall, these data paint a picture of concerns that continue to reflect the relative economic disadvantages of racial/ethnic minorities that existed a decade earlier and to reflect at least a perception of economic disadvantage among females.

Type of Institution

Personal Characteristics

Four-year colleges or universities are attended almost twice as frequently as junior colleges (27.5 = 19.8 + 7.7 compared to 15.5 = 14.8 + .7) and junior colleges at least twice as frequently as vocational/technical schools (15.5 = 14.8 + 7.7 compared to 6.9 = 4.6 + 2.3). A significant number of students (6.6 percent [6.4 + .2], or about one-eighth of those who attend any postsecondary school [56.5 is the sum of entries in the ALL row]) attended two different types of institutions within this 21-month period (table 4-1). Public institutions attract more than three quarters of those who attend any school. Of the whole sample 45.6 percent (4.6 + 14.8 + 19.8 + 6.4) attended public institutions and 10.9 percent (2.3 + .7 + 7.7 + .2) attended only private institutions. Those figures for public institutions include 3.8 percent of the sample who attended both public and private institutions. That means that 14.7 percent attended private institutions for at least some time in the 21-month period.

The various types of institutions are utilized in different combinations by the various race/gender groups, by students with different socioeconomic backgrounds, and by students of different levels of academic achievement. Hispanics are the most likely group to use junior colleges, blacks are least likely. In contrast, Hispanics are about half as likely as whites or blacks to attend universities.

Whites are almost twice as likely as others to attend private universities. But even whites are almost twice as likely to attend public universities as private ones. Hispanics, especially females, are the least likely to attend private universities (table 4-1).

Postsecondary vocational schools are most likely to draw their students from the lower half of the academic performance range and the lower half of the socioeconomic status range. In contrast, junior colleges (predominately public) draw more heavily from the middle two quartiles of both academic performance and socioeconomic status. The highest quartiles are underrepresented in 2-year schools because larger proportions of them attend universities. The lowest quartiles are underrepresented in junior colleges because a smaller proportion of them attend any postsecondary school.

The students with the highest academic performance and from families with the highest SES scores use private universities more frequently than do students with lower academic performance or from a lower SES background. About one-third (for example, 17.5 as a fraction of 33.7 + 17.5) of those

Table 4-1--Percent of HS&B seniors who attended specified types of postsecondary schools by selected background characteristics

Characteristics	Types of Postsecondary Schools							
	Vocational		Junior College		College/University		Multiple	
	public	private	public	private	public	private	public	private
All	4.6	2.3	14.8	.7	19.8	7.7	6.4	.2
Males								
Hispanic	3.7	1.1	17.5	.6	10.8	4.4	3.6	.5
Black	5.4	1.4	11.5	.5	20.0	5.8	3.4	.1
White	4.7	1.9	13.3	.4	20.2	9.1	5.8	.1
Females								
Hispanic	4.4	4.2	19.6	.7	10.8	2.9	6.4	.3
Black	7.4	2.6	11.9	.7	18.2	5.8	8.2	.9
White	4.2	2.8	15.4	1.2	20.6	10.0	7.3	.2
Test Quartile								
Low	7.6	3.0	11.4	.4	6.3	1.3	3.9	.1
2nd	5.6	2.4	17.0	1.1	15.2	3.7	5.9	.2
3rd	4.5	2.6	18.6	1.4	23.7	8.6	9.2	.3
High	1.9	1.7	12.1	.5	40.4	18.8	7.3	.2
SES Quartile								
Low	6.5	2.3	11.7	.6	11.7	3.6	4.0	0.0
2nd	6.0	3.0	15.4	.7	15.3	5.6	5.3	.3
3rd	4.4	2.5	16.9	1.4	22.7	7.8	7.8	.4
High	2.0	1.5	16.0	.6	33.7	17.5	9.3	.2

NOTE: "Public" includes a small fraction of respondents who attended both public and private institutions. "Private" contains those who attended only private insitutions.

in the top test or SES quartiles who attend universities attend private ones, compared to about one-fourth or less (for example, 8.6 as a fraction of 23.7 + 8.6) of those in the other quartiles who attend universities (table 4-1).

Patterns of attendance by type of institution have changed slightly but not dramatically between 1972-73 and 1980-81 (table 4-2). That overall enrollments for males were lower in 1980 than in 1972 and about the same in 1981 as they were in 1973 has been noted in chapter 3. Also mentioned there was the fact that female rates of attendance overall were about the same in 1980 and 1972 but were higher in 1981 than in 1973. Finally, we have pointed out that female enrollment rates in 1980-81 were generally higher than male for the same period although 8 years before the relationship had been the reverse. With only a few exceptions, patterns of enrollment by type of institution reflect these broad trends.

For each type of institution, a smaller percentage of males were enrolled in 1980 than in 1972. For each type of institution they were enrolled with about equal frequency in 1973 and 1981. Females were more likely to be enrolled in 4-year colleges or in 2-year colleges than they had been in 1972, but they were correspondingly less likely to be enrolled in vocational schools. That pattern for females also applied to 1981 and 1973. Thus, the increase in postsecondary enrollment for females occurred primarily in conjunction with a shift in female enrollment toward 2-year and 4-year schools and away from vocational schools. The reduction in initial male enrollment (1972 and 1980), in contrast, was spread rather evenly across types of institutions. Females were increasing not only their rates of postsecondary attendance but also their average level of educational attainment as compared to males. That is, they were also shifting away from schools that trained them for lower-level occupations among graduates of postsecondary education and toward postsecondary education that could be useful in higher-level positions.

The overall increases in attendance rates that occurred because female increased attendance more than offset male decreased attendance occurred only among whites and blacks, not among Hispanics.[10] Rates of enrollment among Hispanics were lower for all types of institutions, though the differences were statistically significant only for 2-year colleges.

The observation in chapter 3 that enrollments are more stable now than in 1972-73 is further supported by looking at continuation rates by type of institution. The continuation rate is the percentage among those enrolled in a postsecondary education in the first year after high school graduation who were also enrolled in the second year. The rates are higher in 1980-81 than in 1972-73 (table 4-3). This increase comes primarily from those enrolled initially in 4-year schools and those enrolled in vocational-technical schools. The continuation rates for 2-year schools were about the same in 1980-81 as they were in 1972-73. The comparisons are not exact because Fetters, Dunteman, and Peng separated those who were only students from those who also worked and further separated full-time from part-time students. In our calculations for HS&B we did not make that distinction. But the comparisons can still be made rather easily. The numbers for Class of '72 in table 4-3 show both categories, students who did not also work and students who did. It is clear that continuation rates for 4-year and vo-tech schools are higher in HS&B than for Class of '72.

Table 4-2—Percent of HS&B seniors and NLS '72 seniors who attended specified types of schools, by racial/ethnic characteristics and gender

1980 Activity (1972)	Race/Ethnicity			Gender						
	Hispanic	Black	White	Males	Females	Males			Females		
						Hispanic	black	white	Hispanic	black	white
Type of School											
4-Year	15.9 (16.3)	29.3 (26.6)	33.1 (31.6)	30.0 (31.4)	32.4 (29.0)	15.2	27.1	32.1	16.5	31.1	34.0
2-year	17.0 (20.5)	12.3 (11.6)	14.9 (15.2)	13.8 (15.9)	16.0 (14.3)	15.0	11.2	13.6	18.9	13.2	16.2
Vo-tech	6.1 (6.8)	5.1 (9.3)	5.7 (7.6)	4.9 (6.1)	6.2 (9.2)	4.9	4.6	5.0	7.2	5.5	6.3
Other	.3 (3.2)	.5 (2.3)	1.0 (2.0)	1.0 (2.2)	.7 (1.9)	.2	.5	1.2	.4	.5	.8
No school	60.7	52.9	45.3	50.2	44.6	64.6	56.6	48.1	56.9	49.7	42.7
1981 Activity (1973)											
4-year	15.0 (14.5)	26.6 (23.8)	31.9 (28.5)	29.0 (28.7)	30.8 (26.1)	16.5	25.6	30.9	13.5	27.4	32.9
2-Year	16.5 (16.6)	11.2 (10.1)	13.2 (12.9)	12.9 (13.9)	14.1 (11.8)	15.9	9.5	12.6	17.0	12.6	13.9
Vo-tech	5.6 (4.2)	6.0 (6.1)	5.0 (5.3)	5.6 (5.1)	4.8 (5.6)	5.6	4.5	5.6	5.6	7.2	4.4
Other	.3 (.3)	.5 (.3)	.7 (.5)	.6 (.4)	.7 (.5)	.4	.4	.7	.3	.5	.8
None	62.5	55.8	49.1	52.0	49.6	61.5	59.9	50.3	63.5	52.3	48.0

NOTE: Entries are percent in the column who attend the indicated type of school. Number in parentheses apply to NLS '72 data. NLS '72 data are taken from Fetters, Dunteman, and Peng, table 2. Column entries for HS&B for either year may not sum to 100 because of rounding.

Table 4-3--Percent of students enrolled in specified types of school in 1980 who were enrolled in specified types of school in 1981

	October 1980				
October 1981	4-Year	2-Year	Vo-tech	Other	None
4-Year	85.4 (83.6/77.5)	7.4 (8.0/5.7)	2.2 (3.7/2.1)	23	3.5
2-Year	3.7 (2.9/3.6)	64.3 (65.6/65.7)	3.0 (2.6/2.0)	4	5.4
Vo-tech	1.1 (1.3/1.6)	3.5 (2.6/1.4)	41.9 (35.1/41.0)	2	3.9
Other	.1	.2	0.0	51	0.3
None	9.6	24.7	52.9	19	86.9

NOTE: Percent distribution of those enrolled in column type of school by school type enrolled in at second year. Numbers in parentheses are corresponding figures for (attending college only/attending and working) for 1972-73, from Fetters, Dunteman and Peng, table 8.

Attendance Status

Full-time postsecondary enrollments among new high school graduates is substantially more common than part-time enrollment, in both 1972-73 and 1980-81, although there have been some changes in attendance patterns (tables 4-4 and 4-5). The proportions of students enrolled part-time is rather small for all types of institutions and hence the comparisons over time by type of institution are not very precise. Since differences in part-time rates do not meet strict statistical criteria, we shall not discuss these differences.

The Role of Institutional Characteristics

Direct questions in the survey asked respondents to identify the factors that were important in their selection of an institution. Seven specific areas were listed, reflecting four aspects of the selection decision. The monetary aspect was considered separately in questions about the role of expenses and of financial aid. The academic quality of the institution is reflected in questions about the availability of courses and the academic reputation of the institution. The nonacademic aspect of the postsecondary experience was reflected in questions about the importance of the athletic reputation of the school and the social life on the campus. The final question concerned the importance of remaining close to home so that the student could reside at home while attending. Note that these questions were asked only of those respondents who said that they intended to attend college at some time in the future.

There are clear priorities that emerge from these answers. Academic aspects of the institution are cited as "very important" most often (table 4-6). Financial considerations are the second priority. Overall, the availability of courses is mentioned as "very important" more often than the other areas. The least often mentioned as "very important" is athletic reputation.

Although there are broad patterns of priorities among these areas of concern, each race/gender group has its own particular variation from the overall pattern. For example, within each major racial/ethnic group, females consistently cite expenses, financial aid, availability of courses, academic reputation, and proximity to home as "very important" more often than males. Athletic reputation is less important to them than it is to males, but social life is about equally important among males and females.

Students from different racial/ethnic backgrounds have different priorities in selecting institutions. White and black males place about equal priority on availability of courses and academic reputation of the school. Although Hispanic males are as concerned as other males about academic reputation, as a group they place a slightly lower priority on availability of courses. Hispanic females similarly place less emphasis than black or white females on the availability of courses or on academic reputation, although the availability of courses is the area most frequently cited as very important by Hispanic females, as it is for white females. Unlike males, black and white females differ slightly in the absolute level of importance they assign to academic reputation and course availability, with white females rating each of these areas as "very important" about 5 percent more often than did black females.

Table 4-4--Percent of HS&B seniors attending specified types of postsecondary schools, either full - or part-time, by selected background characteristics

Characteristics	Vocational		Junior College		College/University		Multiple	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Males								
Hispanic	4.3	1.0	12.5	5.7	12.7	2.6	3.9	.2
Black	5.8	1.0	9.4	2.8	25.1	.6	3.1	.2
White	4.9	1.6	10.3	3.4	27.9	1.4	5.5	.3
Females								
Hispanic	6.8	1.5	15.2	4.7	12.5	.9	6.3	.5
Black	7.2	2.2	10.1	2.2	23.2	.5	8.9	.3
White	5.3	1.7	12.4	4.3	29.4	1.3	7.1	.4
Test Quartile								
Low	7.9	2.7	8.7	3.2	6.9	.8	3.1	.6
2nd	5.8	2.3	13.5	4.7	17.8	1.1	5.7	.3
3rd	6.0	1.2	15.7	4.3	30.5	1.8	8.9	.4
High	2.9	.6	9.8	2.9	57.6	1.5	7.3	.3
All	5.6	1.7	11.9	3.8	28.3	1.3	6.2	.4
SES Quartile								
Low	6.8	2.0	9.3	3.0	14.1	1.1	3.7	.4
2nd	7.3	1.8	12.1	4.0	19.5	1.3	5.2	.3
3rd	4.8	2.2	14.0	4.3	29.6	.8	4.5	.6
High	3.1	.4	12.7	3.9	49.4	1.8	9.1	.4
All	5.5	1.6	12.0	3.8	28.1	1.3	5.6	.4
Family Income								
0-6,999	6.1	1.8	10.7	1.2	18.6	.5	5.1	0.0
7,000-11,999	5.8	.9	12.4	4.2	19.7	1.1	5.7	0.0
12,000-15,999	7.3	1.1	12.5	3.4	20.4	1.8	4.3	.7
16,000-19,999	5.8	2.7	13.0	4.6	22.2	.6	4.7	.1
20,000-24,999	5.1	2.0	11.4	3.7	30.7	1.0	7.5	.4
25,000-37,999	4.9	1.4	12.3	4.2	33.9	2.0	8.7	.9
38,000 and up	3.9	.1	11.6	3.9	44.9	1.5	8.6	.2

Table 4-5--Percent of NLS '72 seniors who attended specified types of postsecondary schools in 1972, 1973, by race/ethnicity and gender.

	White Males		Non-White Males	
	October 1972	October 1973	October 1972	October 1973
4-Year				
Full-time	31.7	28.0	19.7	17.3
Part-time	.7	2.0	.5	2.0
2-Year				
Full-time	13.8	11.1	12.6	8.4
Part-time	1.6	3.1	1.4	3.0
Vo-Tech				
Full-time	5.1	3.8	5.3	3.6
Part-time	.8	1.5	.8	1.8
Other				
Full-time	3.0	.4	4.7	.9
Part-time	.9	.6	1.7	.7

	White Females		Non-White Females	
	October 1972	October 1973	October 1972	October 1973
4-Year				
Full-time	28.7	25.3	22.9	19.7
Part-time	.6	1.7	.4	2.1
2-Year				
Full-time	12.3	9.1	10.9	9.4
Part-time	1.7	2.5	1.7	3.1
Vo-Tech				
Full-time	8.1	4.3	8.2	4.7
Part-time	.7	1.2	1.2	2.0
Other				
Full-time	2.7	.4	5.5	.4
Part-time	.9	.6	1.8	.6

SOURCE: Manski and Wise (1983), Appendix tables A3-A6.

Table 4-6--Percent of HS&B seniors who reported that specified factors were "very important" influences in their choice of a postsecondary institution, by gender and race/ethnicity

	Males				Females			
Factors	Hispanic	Black	White	All	Hispanic	Black	White	All
Expenses	38.9	52.8	29.0	32.2	52.2	61.0	37.6	41.5
Financial Aid	47.2	62.8	31.9	36.4	52.9	69.4	36.4	41.3
Course Availability	54.1	62.7	61.6	61.1	61.2	66.3	71.5	70.1
Academic Reputation	45.4	45.6	45.1	45.2	47.2	51.4	55.1	52.9
Athletic Reputation	19 8	29.3	12.3	14.6	15.5	16.6	7.7	9.4
Social Life	27.5	37.4	26.7	27.7	31.4	33.3	23.9	25.6
Living At Home	29.0	24.2	17.2	19.1	41.3	31.6	24.2	26.5

The most striking pattern in priorities concerns the relative importance of financial and academic concerns. Among both males and females, blacks are far more concerned about financial aspects than whites, citing both expenses and financial aid as "very important" far more often than whites. Hispanics were also more concerned with financial aspects than were whites, but not nearly so much as were blacks. Blacks elevate financial aid to the top priority, making them the only racial/ethnic group to cite it as "very important" significantly more often than course availability. Black males regard financial aid as being just as important as course availability, but black females rate it as even more important. Both whites and Hispanics of either gender cite course availability as "very important" more often than they cite either expenses or financial aid as "very important." Also, in contrast to both Hispanics and whites, blacks assign a higher priority to college expenses than to academic reputation of the school.

Match of Attendance and Plans

Plans for further education are defined here in two senses. The first is drawn from a question asked in the senior base year questionnaire about the activity the person expects to be doing in the coming year. The comparison is with the reported activity during the first year following high school graduation, obtained from the first follow-up. The second is the direct question about the level of education the respondent expects to attain. These responses are compared to whether the student actually attended institutions compatible with the level of expectations expressed. Compatibility as used here is described later.

Planned Areas of Activity

Although the question concerning expected activity lists 10 activities in which the student could participate, only those that refer to education and training are considered here. They include taking vocational courses in a vocational or technical school, taking vocational courses in a junior college, taking academic courses in a junior college, taking academic courses in a college or university, and apprenticeship.

Respondents are coded as having planned or not planned the activity and as having participated or not participated in it. There are four combinations of plans and participation for each activity, and any one respondent could have planned or participated in any one or more activities. That is, the activities are not mutually exclusive.

The only purely training response that was offered was apprenticeship. This option has the smallest ratio of people actually following their plans. Only about 5 percent of females planned apprenticeship as seniors, and only one- or two-tenths of a percent actually both planned and pursued the activity. Another 1 to 2 percent of females participated in apprenticeships without having planned to as seniors. Males were about twice as likely as females to plan apprenticeships or to participate in them. These numbers are much too high to reflect expected participation in formal apprenticeship training and suggest that many seniors do not understand what a formal apprenticeship program is. Thus, these figures should be regarded very cautiously.

The "All" column in table 4-7 shows that academic courses at colleges or universities were the activity most likely to be pursued consistently with plans. More than twice as many of those who planned the activity pursued it than did not. The next activity followed most consistently with plans was taking academic courses at a junior college. Students who planned as seniors to take such courses were about equally divided in taking or not taking such courses. A much larger percentage of people took junior college courses even though as seniors they had not expressed intentions to do so. Students who planned vocational courses at either vo-tech schools or junior colleges were much less likely to act consistently with those plans than people planning academic courses. Roughly one-fourth to one-fifth of those planning to take vocational courses actually did so. For Hispanic males (table 4-8), for example, 15.3 (= 3.3 + 12.0) percent planned to take vocational courses at a vo-tech school, and 3.3 percent (=22 percent of 15.3 percent) did take such courses. The percentage who took such courses while not planning to do so was about twice as large as the percentage who both planned and took the courses.

These numbers suggest that those students who plan as seniors to take academic courses are much more likely to do so than are those who plan to take vocational courses. How these different patterns of expectations fulfillment might be explained is hinted at by the race/gender, SES, and academic performance distributions of those who did and those who did not fulfill their plans.

There are three notable patterns of differences in the race/gender groupings. First, among those taking academic courses at a junior college whites were most likely to do so despite not planning to while Hispanics were least likely to do so without planning. Second, among those taking academic courses at a college who planned to do so whites were the most likely to do so in accordance with their senior plans and Hispanics were least likely to do so.

The third pattern is the most interesting because it suggests problems in access or conflicts between aspirations and attainment. About one-sixth of whites who planned to take academic courses at colleges or universities did not take such courses (for white males, 5.9 percent of 34.7 percent [=28.8 + 5.9]). But for both blacks and Hispanics the fraction not fulfilling their plans was about twice as large, nearly one-third (for Hispanic males, for example, 8.2 percent out of 27.3 percent [= 8.2 + 19.1]).

It is possible that those blacks and Hispanics who planned to study in colleges or universities but did not do so could have spilled over into junior colleges instead. If that were the case, and if most of the unplanned academic course-taking at junior colleges represented students who planned to attend colleges or universities but did not, one would expect larger fractions of blacks and Hispanics than of whites to take academic courses at 2-year colleges without having planned to do so. As already noted, however, whites are more likely to take academic courses at junior colleges despite not planning to do so, and the fraction of blacks and Hispanics taking these courses without plans does not seem sufficiently larger (ought to be larger than whites) to begin to account for those who planned but did not take courses at 4-year schools.

Test scores and SES background also give some indication of among whom these frustrated expectations are occurring. As test scores or family socioeconomic background scores increase, students are much more likely to take academic courses at colleges or universities in accord with the plans

Table 4-7--Percent of HS&B seniors' whose educational activities in the first two years after graduation did or did not agree with their plans, by SES quartile

Plans and Activities	SES Quartile Low	2nd	3rd	High	All
Vocational Courses (Vo-tech)					
Planned and did	3.7	3.6	3.2	2.0	3.1
Planned and did not	13.5	12.8	10.4	4.7	10.4
Did but not planned	6.7	7.3	6.6	6.3	6.7
Academic Courses (JC)					
Planned and did	5.0	9.0	10.3	10.7	8.8
Planned but did not	5.6	7.5	7.3	4.1	6.1
Did but not planned	23.2	29.1	43.6	65.0	40.2
Academic Courses (College)					
Planned and did	17.9	23.6	37.2	59.7	34.5
Planned but did not	8.7	7.5	8.2	7.5	8.0
Did but not planned	10.3	14.4	16.8	16.0	14.4
Apprenticeship					
Planned and did	.4	.5	.5	.3	.4
Planned and did not	10.4	9.1	8.9	8.1	9.1
Did but not planned	1.5	1.0	1.0	.9	1.1
Vocational courses (JC)					
Planned and did	1.9	2.1	1.9	1.0	1.7
Planned and did not	8.2	9.5	9.8	5.6	8.3
Did but not planned	8.5	8.8	7.8	7.3	8.1

NOTE: Within each activity (such as apprenticeship) the proportion not in three categories shown represents those who neither planned nor did the activity. Those four categories within each activity sum to 100.

Table 4-8—Percent of HS&B Seniors whose activities in the first two years after graduation did or did not agree with their plans, by race/ethnicity

	MEN			WOMEN		
	HISPANIC	BLACK	WHITE	HISPANIC	BLACK	WHITE
WORK (FULL-TIME)						
PLANNED AND DID	62.0	53.3	63.5	65.9	59.6	67.5
PLANNED BUT DID NOT*						
DID BUT NOT PLANNED	38.0	46.7	36.4	34.1	40.4	32.5
VOCATIONAL COURSES (VO-TECH)						
PLANNED AND DID	3.3	2.7	3.2	2.9	3.4	1.9
PLANNED BUT DID NOT	12.0	8.9	8.2	10.3	12.1	8.4
DID BUT NOT PLANNED	6.8	8.3	6.8	10.9	9.3	6.4
ACADEMIC COURSES (JC)						
PLANNED AND DID	5.7	4.7	7.5	8.9	5.3	7.7
PLANNED BUT DID NOT	5.8	3.0	4.2	6.8	5.0	6.2
DID BUT NOT PLANNED	26.6	33.8	40.7	25.4	39.5	42.2
ACADEMIC COURSES (COLLEGE)						
PLANNED AND DID	19.1	25.6	28.8	18.5	28.7	31.3
PLANNED BUT DID NOT	8.2	11.9	5.9	10.5	12.5	5.5
DID BUT NOT PLANNED	13.2	12.8	19.3	15.8	16.1	18.6
WORK PART-TIME						
PLANNED AND DID	1.9	1.4	.8	1.6	2.5	.9
PLANNED AND DID NOT	.6	.9	.2	.8	.5	.2
DID BUT NOT PLANNED	79.3	64.6	69.4	77.0	66.8	70.7

*Not possible because of question wording

they expressed as seniors (tables 4-7 and 4-9). Therefore, although the absolute percentages of students who planned to take such courses but did not is about the same among all levels of SES and academic performance, the rates of not taking such courses among those who planned to take them decreases substantially as either test score or SES level is increased. For the lowest SES quartile, for example, 26.6 percent (= 17.9 + 8.7) planned these courses but 8.7 percent did not take them. For the top quartile, the percentages are 7.5 percent out of a much larger base, 67.2 percent (= 59.7 + 7.5) that did not take the courses; 7.5 percent is a much smaller fraction of 67.2 percent than 8.7 percent is of 26.6 percent. A similar pattern is shown in table 4-9. Frustration of plans to take academic courses at colleges or universities is much more prevalent among students from the lower levels of socioeconomic status or academic performance.

For students planning academic courses at junior colleges, the patterns of relative fulfillment of plans are qualitatively similar but not nearly as strong. Even among those students planning to take vocational courses at vocational or technical schools, the rate of frustration of plans is more than twice as high for those at the bottom of the test or SES scales than for those at the top. There are clear problems in fulfilling plans for education at any level among those with low academic performance or from families with a low socioeconomic status background.

When the match of plans and actions in 1980 is compared to that for 1972, it is clear that the relatively greater success in meeting plans among those who aspired to 4-year schools occurred also in 1972 (table 4-10). Relatively greater success for those planning to attend 2-year schools than for those planning voc-tech schools is also evident at both 1972 and 1980. For the comparison over the decade, however, the interesting result here is that the conformance between plans and actions was greater in 1972 than in 1980. For each type of institution, the percentage of seniors planning to attend that type in the year following high school graduation who actually did attend such a school was higher in 1972 than in 1980.

By comparing the patterns of match across race/ethnicity and gender we get some insight into the groups among whom the fulfillment of plans is not as likely in 1980 as it was in 1972. We noted above that within the 1980-81 data, black and Hispanic males were the groups that had the most trouble in fulfilling their plans. The comparison in table 4-11 shows a similar pattern, that among those males planning to attend 4-year institutions, blacks and Hispanics showed the greatest change in the frequency with which aspirations were met. In contrast, both among those planning to attend 2-year schools and those planning to attend vo-tech schools, the differences in rates of conformance to plans were about the same for males as for females and the same for Hispanics as for blacks and whites.

Also, recall our observation for 1980 that the frustration of plans amomg blacks and Hispanics to attend 4-year institutions was not mitigated by a compensating flow into 2-year institutions. That observation is further further supported by the comparison in table 4-11. Hispanics who plan to attend 4-year schools were not significantly more likely in 1980 than in 1972 to actually attend 2-year schools. Moreover, the 16.7 percent who did attend 2-year instead of 4-year schools accounts for only one-third (16.7/[100 - 50.5]) of those planning to but not attending 4-year schools. For blacks, the percentage attending 2-year schools among those planning to attend 4-year schools is a little higher in 1980 than it was in 1972, but it still cannot account for the substantial fraction (39 percent) who planned to attend 4-year institutions but did not.

Table 4-9--Percent of HS&B seniors' whose educational activities in the first two years after graduation did or did not agree with their plans, by test quartile

Plans and Activities	Test Quartile Low	2nd	3rd	High	All
Vocational Courses (Vo-Tech)					
Planned and did	4.3	3.5	3.2	1.8	3.2
Planned but did not	15.1	13.9	8.6	3.6	10.3
Did but not planned	7.4	7.6	7.1	4.8	6.8
Academic Courses (JC)					
Planned and did	4.7	9.0	11.2	9.5	8.6
Planned but did not	6.4	6.4	6.5	4.4	6.0
Did but not planned	16.5	30.1	45.9	69.0	40.4
Academic Courses (College)					
Planned and did	11.0	22.5	37.6	66.4	34.4
Planned but did not	8.2	9.0	7.6	6.7	7.9
Did but not planned	10.2	16.6	19.4	12.2	14.6
Apprenticeship					
Planned and did	.4	.8	.4	.1	.4
Planned and did not	9.5	10.4	9.6	6.6	9.0
Did but not planned	1.2	1.2	.9	.7	1.0
Vocational Courses (JC)					
Planned and did	1.8	2.3	1.8	.9	1.7
Planned and did not	8.0	11.9	8.2	5.3	8.4
Did but not planned	10.0	8.8	8.5	5.7	8.2

NOTE: Within each activity (such as apprenticeship) the proportion not in three categories shown represents those who neither planned or did the activity. Those four categories within each activity sum to 100.

Table 4-10—Percent of HS&B seniors and NLS-72 students with specified planned activities who undertook the activity

1980 Activity (1972 Activity)	Planned Activity: 4-Year	2-Year academic	2-Year vo-tech	Vo-Tech	Work full-time	Work part-time	On-The-Job Training	Military	Homemaker	Other
n - HS&B (NLS '72)	4378 (4919)	1024 (2214)	652	711 (1186)	2645 (3708)	200 (272)	228 (327)	356 (384)	90 (321)	268 (620)
4-Year	76.0 (81.5)	10.1 (9.6)	8.6	4.3 (2.3)	4.3 (2.3)	11.9 (6.6)	6.2 (3.5)	4.5 (8.2)	3.5 (1.0)	12.1 (5.5)
2-Year	9.6 (7.3)	58.4 (63.0)	39.9	12.4 (9.2)	7.5 (5.4)	15.7 (8.1)	12.7 (4.7)	4.4 (2.3)	9.8 (1.8)	8.6 (9.1)
Vo-Tech	1.5 (1.9)	4.5 (5.5)	13.4	33.0 (48.6)	4.1 (5.0)	5.0 (3.7)	12.2 (14.4)	1.5 (6.0)	3.2 (3.0)	4.3 (5.0)
Other Study	.8 (1.6)	1.5 (1.6)	1.9	.6 (2.1)	.3 (1.7)	.1 (1.7)	1.3 (2.8)	1.6 (5.9)	0.0 (1.6)	1.0 (2.6)
No School	12.0	25.5	36.2	49.7	83.8	67.2	67.7	87.9	83.5	73.9

SOURCE: NLS '72 data are from Fetters, Duntemann, and Peng, table 4. That source does not distinguish between academic and vocational-technical 2-year institutions.

Table 4-11--Comparison in percentages for HS&B and NLS '72 seniors of plans and actual attendance by type of institutions, race, and gender

1980 Activity (1972)		Race/Ethnicity			Gender		Males			Females		
		Hispanic	Black	White	Males	Females	Hispanic	black	white	Hispanic	black	white
Planned:	4-Year	71.2 (81.3)	73.2 (81.7)	87.5 (91.8)	82.6 (90.5)	86.6 (90.9)	74.3	72.5	84.3	68.5	73.6	90.4
Attended:	4-Year	50.5 (64.8)	60.9 (72.2)	78.2 (82.9)	70.7 (80.4)	76.7 (82.7)	50.1	59.3	74.4	50.9	62.1	81.6
	2-Year	16.7 (16.2)	10.3 (7.0)	8.1 (7.0)	10.6 (8.7)	8.2 (5.9)	20.4	10.9	8.9	13.3	9.8	7.3
	Vo-Tech	4.1 (.3)	1.9 (2.5)	1.2 (1.9)	1.3 (1.5)	1.6 (2.4)	3.8	2.4	.9	4.3	1.6	1.5
Planned:	2-Year	64.6 (71.4)	57.9 (67.1)	68.8 (79.0)	66.6 (78.6)	68.0 (77.4)	53.5	55.0	69.1	71.3	59.7	68.5
Attended:	4-Year	7.7 (6.5)	14.2 (14.1)	9.0 (9.9)	9.2 (9.2)	9.4 (9.9)	5.5	16.6	9.0	9.1	12.6	9.1
	2-Year	51.4 (62.2)	35.8 (45.3)	51.6 (63.5)	50.2 (65.5)	50.4 (60.6)	46.1	29.4	52.4	54.5	39.8	51.1
	Vo-Tech	5.5 (2.8)	7.9 (7.8)	8.1 (5.6)	7.1 (3.9)	8.2 (6.9)	1.8	9.0	7.7	7.7	7.3	8.4
Planned:	Vo-Tech	36.2 (50.6)	36.6 (45.8)	52.3 (63.2)	44.2 (55.3)	51.0 (63.2)	32.9	34.8	48.1	39.4	37.5	55.4
Attended:	4-Year	3.3 (2.6)	8.0 (2.9)	3.7 (2.4)	4.6 (2.6)	3.8 (2.1)	5.4	8.4	4.1	1.2	7.8	3.5
	2-Year	11.1 (14.6)	10.5 (11.8)	12.0 (8.6)	8.4 (10.1)	14.5 (8.5)	6.4	12.0	8.3	15.7	9.7	14.7
	Vo-Tech	21.8 (33.5)	18.1 (31.2)	36.6 (52.3)	31.2 (42.6)	32.7 (52.5)	21.1	14.5	35.7	22.4	20.1	37.2

SOURCE: NLS '72 data are from Fetters, Dunteman, and Peng, table 5.

The other measure of consistency compares actual attendance patterns with expected attainment. This measure, because it is calculated after only 2 years of possible postsecondary study, can only show whether an attendance pattern is consistent with expressed expectations, not whether the person fulfilled the plans.

Those expecting graduate degrees are deemed to have acted consistently with their expectations if they attend a college or university for at least 6 months and not always part-time. Those expecting 2-year or 4-year college degrees could have attended any junior college or college at for least 6 months, not only part-time. Those expecting to attend college for less than 2 years could have attended any college for any length of time, full-time or part-time. Those anticipating at least 2 years of trade schools acted consistently if they took any college work or if they attended vocational/technical/trade schools for at least 6 months not always part-time. Those planning less than 2 years of trade school acted consistently if they attended any postsecondary schools at all.

Despite these less stringent requirements for consistent action as lower levels of expectations are considered, consistent action is relatively more frequent among those expecting at least a 4-year degree than among those expecting less education (table 4-12). In addition, among all expectation levels above college degree, the rates of consistent action are usually similar to each other. A parallel similarity in action holds among most expectation levels below the college degree. That is, the formation of educational aspirations or expectations and the ability to act consistently with those aspirations seem to be materially different above the level of the standard 4-year college degree than below it.

The relationships between consistent action and race/gender, family income, or academic aptitude tell us only a little about the reasons for those patterns of similarity (tables 4-13 and 4-14). For most of the expectations levels, whites are much more likely than blacks or Hispanics and females are more likely than males of the same racial/ethnic background to act consistently with the expectations they expressed as seniors. The exceptions occur among those aspiring to college of less than 2 years or to 2 or more years of vocational/trade/technical school. Among the racial/ethnic minority groups, males and females show different rates of consistency. Hispanic males who aspire to a doctorate, to a college degree, or to at least 2 years of trade school are more likely than black males to act consistently those expectations. Black males have higher rates of consistency only for with those levels of expectations that have few people in them and therefore large statistical errors in the estimated proportions. Hispanic females, in contrast, are much less likely than black females to act consistently with their expectations. In any event, it is clear that whites and females are either more realistic in their expectations or in a more favorable position for carrying them out than are males from minority racial/ethnic backgrounds.

Family income may be important in facilitating action consistent with aspirations. But these data suggest that whatever relationship may exist between family income and fulfillment of educational expectations is not a simple one and is not the same regardless of expectations. For example, among those expecting at most a college degree, the percentage acting consistently with plans is higher for the highest income bracket than for the lowest. But the likelihood of consistent action does not steadily increase as one considers successively higher income brackets.

Table 4-12--Percent of HS&B seniors whose educational attendance is consistent with their educational expectations, by gender and race/ethnicity

Educational Expectations	Males			Females		
	Hispanic	Black	White	Hispanic	Black	White
Trade School						
LT 2 years	25.1	23.8	33.9	28.5	37.4	43.2
Two years or more	38.4	25.9	36.6	47.1	32.9	40.9
College						
LT 2 years	24.4	53.3	33.3	44.8	39.1	33.0
Two years or more	27.8	33.7	42.6	45.5	40.3	50.7
Bachelor's Degree	57.6	52.6	72.8	54.2	61.8	78.6
Master's Degree	47.4	53.8	67.1	53.3	60.0	71.0
Doctorate	65.0	57.1	71.9	44.5	58.2	78.9

Table 4-13--Percent of HS&B seniors whose educational attendance is consistent with their educational expectations, by test quartile

Educational Expectations	Test Quartile			
	Low	2nd	3rd	High
Trade School				
LT 2 years	31.7	31.6	52.1	52.1
Two years or more	30.5	34.6	50.0	60.0
College				
LT 2 years	29.9	23.2	47.1	42.7
Two years or more	34.3	48.9	53.1	49.1
Bachelor's Degree	46.0	69.0	74.3	82.0
Master's Degree	38.5	57.2	61.7	77.8
Doctorate	38.8	43.6	70.9	83.6

NOTE: See text for the specification of "consistent action".

Table 4-14--Percent of HS&B seniors whose educational attendance is consistent with their educational expectations, by family income

Educational Expectations	Family Income						
	0-6,999	7,000-11,999	12,000-15,999	16,000-19,999	20,000-24,999	25,000-37,999	38,000+
Trade School							
LT 2 years	28.7	33.5	41.4	34.1	37.4	43.4	45.3
Two years or more	27.1	32.7	33.5	38.1	39.1	46.4	54.2
College							
LT 2 years	15.8	41.0	32.7	41.9	45.9	26.6	38.0
Two years or more	48.2	41.7	44.4	34.5	50.2	57.8	41.2
Bachelor's Degree	67.8	65.4	60.7	73.6	78.9	73.0	80.2
Master's Degree	52.3	64.4	56.7	66.0	64.8	69.0	73.9
Doctorate	65.6	65.0	66.6	62.4	78.9	71.3	77.9

CHAPTER 5

SOURCES OF FINANCING POSTSECONDARY EDUCATIONAL EXPENSES OF STUDENTS

With the phasing-out of Social Security education benefits, reinstatement of income ceilings on eligibility for some Federal loans and grants and limits on interest subsidies for guaranteed loans, the issue of the structure of Federal financial aid programs has been placed on the policy agenda. As noted in chapter 1, aid to students, and particularly Federal programs of aid, had grown substantially between the early 1970s and the early 1980s. Passage of the Middle Income Student Assistance Act (MISAA) further expanded eligibility for Federal student aid programs. In 1981 reductions of up to 44 percent were proposed, including cuts in Pell grants, abolition of Supplementary Economic Opportunity Grants, National Direct Student Loans, and State student incentive grant programs, reduced subsidies for Federally guaranteed student loans, and exclusion of graduate and professional students from eligibility for guaranteed loans. Many of the proposals were not approved by the Congress, but the issue remains alive in public debate.

Also as noted in chapter 1, other proposals have been offered recently to expand aid to students through tax incentives or outright grants. And there is some indication that schools are shifting their criteria for issuance of student aid in such a manner that students with financial need may be adversely affected, even without changes in Federal aid programs.

In this chapter, the use of methods of financing is examined with regard to the personal characteristics of those students who use them. This examination conveys some impressions of whether those programs that are intended to be need-based are actually being allocated consistently with factors that affect need, such as family income, or by other criteria, such as ability, and whether those programs that are supposed to allocate their funds according to ability actually do so. It allows one to see how the various aid programs complement each other.

The need for looking at specific programs rather than just broad categories of financing was noted in chapter 1. But student-reported information on methods of financing is not always as accurate as one might wish. For example, more than 10 percent of students in NLS '72 who used any kind of grant or scholarship in 1972 or 1973 reported that they used Pell grants (then called BEOG grants) in 1972. As Barnes and Neufeld (1980) noted, however, the program was not funded until 1973-74. With regard to the HS&B data, a study of Federally guaranteed student loans has shown that students did not accurately report the use or amount of these loans in the HS&B questionnaires (NORC 1984). These kinds of problems require that the HS&B and NLS-72 data on financing by specific sources be interpreted with considerable caution. But the importance of addressing the question of whether specific programs are functioning as intended and are complementing or duplicating each other argues for presenting the data by specific type of program. Readers can then judge for themselves how strongly to qualify conclusions based on the patterns that emerge.

With these conflicting considerations in mind, this chapter proceeds on two tracks. The first compares both the student-reported frequency of use and the relative degree of reliance on each of four broadly-defined sources of financing--grants (including scholarships), loans, assistance

from relatives, and own financing sources--across the same personal characteristics for which expectations and attendance have been examined. The second considers only the frequency of use for 26 specific sources of financing and compares the student-reported frequencies by race/gender, aptitude, and family income. The cautions in interpretations of information concerning specific sources of financing should always be kept in mind.

We begin by considering who uses each of the broadly-defined categories of sources of financing. "Grant" is defined in HS&B to include any assistance from a source outside the family (or circle of close friends) that does not have to be repaid and that does not represent payment for specific work performed by the student. This definition embraces scholarship awards. The second category is loans, which includes Federal, State, and private loans from many sources. The third category is assistance from friends and relatives, of which by far the most important are parents. The fourth category is the student's own funds, whether accumulated savings or earnings either before or during the enrollment period.

General Financing Categories

Among those attending a postsecondary institution, grants are used more often by blacks (table 5-1) than by whites or Hispanics. Hispanic Americans cite grant use significantly less than blacks but about 5 percentage points more often than whites. Whereas about three out of five blacks use grants in some amount, fewer than half of the Hispanics and about two out of five whites use it. The relative patterns by race/ethnicity look similar for both genders.

Some grant programs are based on need and others on academic ability. In a finding that agrees with that of Kohn, Manski, and Mundel (1974), we find that rates of use of the general category of grants vary with both family income and aptitude. Although there is not a perfect pattern of increased use of grants as higher test quartiles are considered, the least academically able (among those who attend) use grants least often and the most able use them most often.[11] The pattern by family income level is clear. More than two-thirds of those in the lowest bracket (less than $7,000) and less than one-fourth of those in the highest bracket (over $38,000) use grants. The fraction using grants decreases steadily as income rises (table 5-1).

Hispanics are less likely to use loans than are either blacks or whites. Only about one-fifth of Hispanics use loans, whereas nearly one-third of whites use them. Compared to whites, slightly fewer blacks of either gender use loans, but the difference between black and white females is small enough to be an artifact of the sample. As with grants, loans are used more often by students of higher ability than by those of lower ability. This suggests that financial institutions and financial aid officers screen loan applicants at least partially on the basis of their academic records (table 5-1).

Income patterns of loan use suggest either that need criteria are not applied very extensively, or that, when need criteria are applied, ability to repay the loan is also a major consideration. Use of loans is similar across all income levels. There is one hint in the data, albeit a weak one, that middle income families feel the cost squeeze more sharply than others.

Table 5-1--Percent of HS&B seniors using specified sources of financing in either 1980 or 1981, by selected background characteristics

	Sources of Financing			
	Grant	Loan	Relatives	Own
Males				
Hispanic	37.7	19.5	31.8	51.9
Black	56.4	25.9	26.4	35.3
White	35.8	31.2	39.4	58.1
Females				
Hispanic	44.8	19.2	28.2	41.4
Black	57.7	32.9	28.0	37.3
White	40.8	34.5	46.2	56.5
Aptitude				
Low	32.3	19.1	25.0	37.5
2nd	40.4	26.9	34.7	48.4
3rd	37.7	30.5	40.0	59.5
High	50.6	43.1	53.0	66.9
Family Income				
0-6,999	65.6	29.8	18.6	43.4
7,000-11,999	59.3	27.2	23.2	49.3
12,000-15,999	52.7	31.5	32.2	55.2
16,000-19,999	45.5	34.6	35.6	60.4
20,000-24,999	42.5	34.9	48.0	59.3
25,000-37,999	34.6	30.4	47.0	59.9
38,000 and up	24.5	31.3	53.8	49.0

NOTE: Respondents may have used more than one source.

Families with incomes between $16,000 and $24,000 are about 5 percentage points more likely to use loans than are the other income categories (table 5-1).

Use of aid from relatives or friends (we will see later that over 90 percent of the time the relatives are parents) is more prevalent among whites than among blacks or Hispanics. Only one-fifth of those whose families have income of less than $7,000 use aid from relatives or friends, whereas more than half of those from families with incomes over $38,000 use relatives' aid. The fraction who use relatives' aid generally increases with higher family income (table 5-1).

Use of a student's own funds is least frequent by blacks, somewhat more frequent by Hispanics, and most frequent by whites. This is not purely a reflection of the relative economic fortunes of the racial/ethnic groups, for there is here, as with loans, evidence of differential use by middle income students. Own funds are used most often by those students from families with incomes between $16,000 and $38,000 (table 5-1).

We measured the extent of reliance on financing sources in another way. We looked at the total amount a respondent reported having to finance and asked what fraction of that was accounted for by grants or loans (table 5-2). The data support the impressions we had from frequency of grant use, but the evidence is much more dramatic when seen from this perspective, in which amount of financing is considered.

Whites are the least likely to use grants. Only about 40 percent (100 - 58.6 for men, 100 - 54.5 for females) used grants for at least one-tenth (rounded) of their financing. Hispanic males and females were slightly more likely to use grants. But both black males and females were dramatically more likely to use grants. Over 70 percent of black males (100 - 28.0) and black females (100 - 26.3) used grants for at least one-tenth of their expenses, and 30 percent of black males and 20 percent of black females used grants for virtually all of their financing. These figures suggest that blacks of either gender rely heavily on grants to attend postsecondary schools. Hispanic students rely more heavily on grants than do whites, with 13 percent and 17 percent of females using grants for nearly all of their expenses, while only 7 percent of whites rely totally on grants.

There is also a pattern of use by type of institution attended and type of attendance pattern (full-time or part-time only) (table 5-3). Some types of institutions were not attended often enough to give reliable estimates of the frequency of use of sources of aid, and those types of institutions are indicated in table 5-3. But the others show an interesting pattern.

Note first that those who attend private 4-year institutions full-time have the highest frequency of reporting use for all categories of financing. Students attending 4-year institutions, either public or private, are more likely than others to use their own funds. Those attending private schools are more likely to use some form of grants. Loans are used most often by those attending private institutions at any level full-time.

Specific Financing Categories

We also examined the specific types of grants, loans, friends' aid, or own resources that are used by each type of student. Keeping in mind the

Table 5-2--Percent of HS&B seniors whose proportion of total financing over 2 years is accounted for by the specified source of financing, by selected background characteristics

	Source of Financing			
	Grant		Loans	
	<5%	>95%	<5%	>95%
Males				
Hispanic	52.8	13.0	75.0	3.0
Black	28.0	29.6	67.3	3.7
White	58.6	6.7	62.2	4.8
Females				
Hispanic	43.2	17.3	75.4	2.9
Black	26.3	20.6	58.1	6.8
White	54.5	6.7	60.0	4.5
Aptitude				
Low	53.3	17.7	72.2	5.4
2nd	51.4	11.8	67.0	4.7
3rd	57.6	6.8	64.2	4.3
High	47.4	5.5	53.2	4.3
Family Income				
0-6,999	23.0	25.8	66.3	3.5
7,000-11,999	24.5	17.3	65.4	2.2
12,000-15,999	39.5	12.5	63.3	3.8
16,000-19,999	48.0	8.1	58.9	5.7
20,000-24,999	54.0	6.2	60.3	4.0
25,000-37,999	61.7	5.6	63.9	3.9
38,000 and up	73.4	4.5	61.4	5.6

NOTE: Respondents may have used more than one source. Sources not shown in this table include relatives (including parents) and friends and own earnings or savings.

Table 5-3--Percent of HS&B seniors attending a postsecondary school and paying tuition of $2,000 or more over 2 years who use the specified source of financing in either year, by type of school attended

		Source of Financing			
	(n)	Aid	Loan	Relatives	Own
Vocational					
Public					
full-time	400	30.3	23.1	27.8	44.5
part-time	117	8.0	2.0	22.0	40.0
Private					
full-time	202	34.2	43.1	23.2	54.2
part-time	45	10.0	20.0	30.0	40.0
2-Year					
Public					
full-time	1310	36.5	15.5	34.5	52.6
part-time	453	10.7	2.0	24.2	52.5
Private					
full-time	85	52.3	43.7	30.0	51.0
part-time	6	--	--	--	--
4-year					
Public					
full-time	2138	49.5	38.8	48.9	59.5
part-time	128	16.7	5.9	31.2	48.6
Private					
full-time	915	59.3	56.9	53.2	60.0
part-time	21	--	--	--	--
Multiple Institutions					
Public					
full-time	726	44.9	39.2	44.0	53.5
part-time	43	10.0	20.0	30.0	50.0
Private					
full-time	26	--	--	--	--
part-time	3	--	--	--	--

caveats we issued earlier in this chapter, we review each of these specific sources, considering grants first, then loans, friends' aid, and own resources. Within each broader category, we consider first those specific sources used most often.

Special attention should be directed to the way totals are presented and how these data on specific financing sources are discussed. In tables 5-4, 5-5, 5-6, 5-7, 5-8, 5-9, and 5-10, the percentages shown for any one financing source are calculated as the percentage of the base that uses the general category within which the specific source falls. For example, in table 5-4, the figure 66.6 in the first row and column should be interpreted as follows: Among all Hispanic males in the sample who attended a postsecondary institution at any time during the period covered by the survey, 66.6 percent of the group of those who used any grant used a Pell grant in 1980-81. Since 45.0 percent (100 - 55.0) of all Hispanic males in the sample who attended postsecondary school used some form of grant, about 30 percent (.666 x .45) of Hispanic males in the sample who attended a postsecondary school used Pell grants in 1980-81. Similarly, the 47.2 percent of Hispanic males who used NDSL loans in 1980-81 should be interpreted as 47.2 percent of those who received any kind of loan for postsecondary education during the period covered by the survey. Comments in the text on the relative frequency of use of a specific program always carry the implicit qualifier: ". . . among those who used (the appropriate general financing source) . . ." where the general financing sources are grants, loans, friends' or relatives' aid, and own sources of financing. The text indicates explicitly those few statements to which the implicit qualifier does not apply.

Pell Grants

Pell grants are a Federal program that is not campus-based. Financial need, as measured by family income, is a criterion for qualifying for the grant, and the amount of the grant depends in part on school tuition. One would expect the use of such grants to vary inversely with family income and to show no necessary relationship to aptitude. The program is an important one because the dollar amount of Pell grants rose from $122 million in 1973 to about $2.6 billion in 1981, making it one of the largest single sources of aid. The average award per recipient in 1980-81 was about $960 (Gillespie and Carlson 1984). Along with guaranteed student loans, Pell grants were the principal aid source outside the family (Astin 1982).

Pell grants are the most widely used grant program and are used with roughly equal frequency at all types of institutions (tables 5-4, 5-5, 5-6, and 5-7). More than half of all students who receive some kind of grant use Pell grants.

In view of the caveats we have cited regarding use of student-reported data on finances, we compare HS&B with the results of another study. Gillespie and Carlson (1984) estimate that in 1980-81, 35 percent of all students use Pell grants. The estimate from table 5-6 for 1980-81 is about 26 percent.[12] The 26 percent figure applies to all high school seniors who attended college in either 1980-81 or 1981-82 or both years. The Gillespie and Carlson figure at 35 percent applies to the 1980-81 academic year only. If the HS&B figure were calculated for just the 1980-81 academic year, by excluding students attending only in the 1981-82 academic year the

Table 5-4—Percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by race/ethnicity and gender

Grants, Scholarships (% of those in race/gender category receiving aid who used specific source)	Male						Female					
	Hispanic		Black		White		Hispanic		Black		White	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	66.6	60.0	79.4	69.6	48.0	46.0	79.6	71.6	86.2	89.4	53.4	49.3
SEOG	15.2	13.5	20.0	21.9	15.4	12.8	16.7	16.6	25.5	26.6	12.2	12.1
ROTC	0.0	0.2	0.6	0.6	1.8	2.6	3.4	4.5	0.2	0.6	0.2	0.3
Social Security	12.7	11.8	9.0	10.2	14.7	14.4	7.9	9.3	15.9	14.8	13.6	16.3
Nursing	0.4	3.8	0.0	0.3	0.0	0.1	0.3	0.9	0.2	0.2	2.2	1.3
V.A. Survivors	2.7	1.7	2.2	2.0	1.9	2.6	5.0	5.9	2.4	2.9	2.6	3.6
VEAP	0.4	1.8	0.0	0.0	0.3	0.3	0.6	0.2	0.6	0.4	0.0	0.3
State Scholarship	15.3	12.0	8.2	11.8	19.8	17.9	10.7	9.7	11.6	10.2	16.6	18.5
College/University	19.1	14.6	18.4	17.8	29.5	28.2	10.9	8.3	13.2	6.5	25.6	22.7
Private Organizations	6.4	4.9	10.4	3.8	14.8	9.4	13.1	8.0	9.9	4.9	22.4	9.4
Voc. Rehab.	6.0	1.0	1.1	1.8	1.4	0.8	2.8	3.0	0.3	0.4	0.8	1.0
Unknown Source	4.4	9.0	2.6	5.2	4.4	5.5	2.9	2.9	5.9	4.0	3.9	4.1
Other	19.8	20.8	22.0	24.9	21.2	22.6	13.3	16.2	17.6	16.0	22.4	24.3
(None)	(55.0)		(34.6)		(61.1)		(50.9)		(32.7)		(56.4)	
Loans (% of those in race/gender category using loans who used specific source)												
NDSL	47.2	37.0	44.9	34.3	33.8	24.0	24.5	24.8	52.0	39.1	30.8	26.7
GSL	36.6	42.5	34.2	39.8	47.4	54.8	41.9	27.9	25.3	43.0	41.0	48.5
Nursing	0.4	1.8	0.0	0.0	0.1	0.0	1.6	0.0	0.0	2.5	2.7	1.3
State	7.2	7.6	6.0	5.4	10.9	12.6	7.3	8.5	5.8	5.8	9.0	8.5
College/University	2.9	5.4	10.1	5.6	4.6	3.5	5.6	9.0	5.9	6.4	4.2	5.1
Regular Bank	1.2	5.9	8.5	19.4	10.2	10.2	18.3	15.8	11.6	8.4	11.8	12.4
Parents, Relatives	4.9	10.8	7.7	8.1	9.1	10.4	6.2	7.5	7.3	8.6	7.7	9.5
Unknown Source	3.8	2.2	1.8	2.7	0.8	1.2	3.9	4.9	4.8	3.6	3.0	2.4
Other	9.3	8.3	5.4	5.2	2.3	2.2	9.4	14.2	4.4	4.5	4.9	4.3
(None)	(76.8)		(71.0)		(66.0)		(76.9)		(59.5)		(62.7)	

Table 5-4 Continued

Family or Friends (% of those in race/gender category receiving aid from family or friends who used specific source)	Male						Female					
	Hispanic		Black		White		Hispanic		Black		White	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	94.0	94.2	93.5	87.0	96.5	94.5	95.7	90.4	94.4	87.0	95.4	92.0
Spouse	0.2	0.0	0.0	1.0	0.3	0.5	0.8	1.3	0.7	1.7	0.2	1.6
Other	7.3	7.1	16.7	14.2	7.2	8.0	6.4	10.6	16.7	20.5	7.2	8.7
(None)	(61.4)		(63.2)		(54.6)		(64.2)		(61.2)		(46.8)	
Own Resources (% of those in race/gender category using own resources who used specific source)												
Savings from Before	54.0	49.3	59.4	45.0	68.5	48.9	56.9	48.8	56.0	43.1	70.7	49.0
Earnings from Before	42.3	47.8	39.8	47.6	54.9	61.5	42.0	38.0	37.4	45.1	47.1	53.9
College Work Study	10.2	14.3	17.8	13.5	10.5	9.8	8.9	10.4	31.1	24.9	12.4	14.5
Assistantship	0.9	0.2	1.4	0.8	0.4	0.6	0.4	1.9	1.1	1.4	0.5	0.8
Earnings While Enrolled	24.4	28.4	17.7	22.7	28.5	31.7	36.4	39.0	25.6	18.4	32.2	39.1
(None)	(38.2)		(47.5)		(32.0)		(44.8)		(49.1)		(33.2)	

Table 5-5—Percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by family income category

Grants, Scholarships (% of those in family income category receiving aid who use specific source)	Income Category													
	0-6,999		7,000-11,999		12,000-15,999		16,000-19,999		20,000-24,999		25,000-37,999		38,000+	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	86.7	82.0	84.6	76.9	71.3	64.1	63.2	58.6	53.5	47.8	33.5	35.9	21.4	30.3
SEOG	28.4	23.4	25.1	22.6	13.2	16.8	14.0	15.9	13.0	11.7	10.2	11.5	7.1	5.3
ROTC	0.0	1.8	0.1	0.3	0.0	0.3	0.3	0.3	0.7	0.9	1.6	2.3	3.6	3.9
Social Security	27.5	23.6	20.0	22.8	16.3	17.8	11.8	14.6	8.0	9.4	6.1	8.0	4.7	8.8
Nursing	1.8	0.3	0.0	0.3	0.9	1.1	1.2	0.3	1.5	1.0	1.6	10.8	0.0	0.0
V.A. Survivors	2.2	3.2	4.0	3.8	3.3	4.8	2.7	3.2	1.4	1.9	1.0	1.3	1.2	2.2
VEAP	0.0	0.0	0.2	0.2	1.0	1.6	0.4	0.3	0.1	1.0	0.1	10.0	0.0	0.0
State Scholarship	20.2	19.4	11.9	14.1	14.8	14.4	16.7	15.7	20.9	21.4	14.8	13.8	9.2	8.2
College/University	12.1	9.5	17.6	13.2	17.5	16.4	26.8	21.7	30.0	26.0	30.6	27.4	31.5	25.1
Private Organizations	12.2	7.6	14.8	4.9	12.4	4.5	13.5	5.2	22.2	12.8	24.8	12.6	21.0	12.4
Voc. Rehab.	0.3	0.3	0.8	1.4	0.7	0.3	1.3	2.8	1.7	0.9	1.8	0.4	0.0	0.0
Unknown Source	7.5	5.6	3.8	4.4	2.4	3.6	2.2	1.1	4.0	5.6	4.3	4.7	5.9	7.0
Other	20.6	17.2	24.8	25.1	16.8	19.0	23.9	23.4	19.9	20.3	25.0	28.3	25.0	28.3
(None)	(28.5)		(34.5)		(42.0)		(51.8)		(54.1)		(63.0)		(73.6)	
Loans (% of those in family income category using loans who used specific source)														
NDSL	59.5	40.6	58.8	38.3	41.3	32.6	39.8	25.3	32.0	25.2	24.1	22.8	20.5	15.0
GSL	16.4	39.7	29.0	44.0	32.5	42.0	37.8	50.4	40.6	43.8	52.1	55.9	58.6	57.9
Nursing	0.6	0.0	0.5	0.0	0.0	0.7	2.5	0.3	2.6	2.5	0.7	0.8	0.0	0.1
State	5.2	4.8	2.9	9.5	8.5	7.1	11.0	9.2	13.2	13.1	8.3	8.8	11.3	13.2
College/University	3.8	3.6	8.4	5.8	7.5	7.6	6.3	6.3	4.0	3.3	3.0	3.7	3.4	2.0
Regular Bank	5.5	5.8	8.6	19.0	13.1	8.1	8.3	12.3	12.2	11.1	12.1	12.6	10.8	9.0
Parents, Relatives	9.0	3.2	7.0	9.4	12.7	18.4	5.2	7.9	4.9	7.8	10.6	12.4	5.8	6.3
Unknown Source	3.3	4.0	0.8	6.0	0.8	2.2	1.3	1.5	1.6	0.5	2.6	2.4	3.4	3.4
Other	8.7	3.0	4.9	2.8	8.4	7.1	4.0	4.6	4.2	4.9	5.5	4.7	0.9	1.1
(None)	(65.1)		(69.0)		(65.3)		(62.0)		(61.8)		(66.9)		(67.5)	

Table 5-5 Continued

Family or Friends (% of those in family income category receiving aid from family or friends who used specific source)	Income Category													
	0-6,999		7,000-11,999		12,000-15,999		16,000-19,999		20,000-24,999		25,000-37,999		38,000+	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	88.4	83.0	86.5	82.5	92.0	87.0	95.9	93.2	95.8	94.3	97.2	93.2	97.4	96.6
Spouse	0.0	7.4	0.4	0.8	0.0	4.5	0.7	0.8	0.6	1.2	0.2	1.0	0.1	0.0
Other	21.4	20.2	14.7	15.8	12.7	17.1	8.6	10.8	10.4	10.6	5.7	8.1	4.3	3.4
(None)	(73.5)		(70.4)		(61.2)		(56.4)		(46.5)		(45.9)		(38.2)	
Own Resources (% of those in family income category using own resources who used specific source)														
Savings from Before	71.5	52.0	59.4	45.0	61.9	40.7	65.4	45.9	68.2	43.5	72.2	53.0	70.9	49.0
Earnings from Before	40.7	35.9	47.8	53.4	45.8	54.0	50.5	57.5	47.4	60.8	48.5	56.6	54.0	61.2
College Work Study	20.6	20.4	26.0	18.6	13.2	12.7	14.0	13.9	14.4	16.9	12.3	10.4	4.5	8.1
Assistantship	3.3	4.3	1.4	1.3	0.4	0.5	0.7	0.5	0.9	1.6	0.0	0.1	0.3	0.6
Earnings While Enrolled	21.3	26.4	29.0	31.7	32.7	35.2	28.6	34.0	30.6	38.0	33.2	37.0	24.4	28.9
(None)	(43.0)		(36.2)		(32.9)		(27.8)		(30.7)		(32.8)		(42.9)	

26 percent figure would begin to approach the 35 percent finding of Gillespie and Carlson. The figure from HS&B does not seem to be substantially out of line with that reported by Gillespie and Carlson (1984).

As one would expect, students from low income families use Pell grants much more often than those from the highest income bracket. Blacks of either gender rely far more heavily on Pell grants than do either Hispanics or whites. Hispanics in turn rely more heavily on them than do whites.

Pell grants are also used more heavily by students of lower academic aptitude than by high aptitude students (table 5-6). This pattern of use is not an explicit part of the program design. But the measure of aptitude is correlated (inversely) with family income, and family income is one of the criteria for eligibility.

The reliance of students from low-income families on Pell grants is important for policy. One rigorous, excellent study uses NLS '72 data and devotes one entire chapter on the analysis of the use of Pell grants. It concludes that 41 percent of low-income students who received Pell grants would not have taken courses without them. In contrast, only 17 percent of middle-income and 6 percent of higher-income students would not have taken courses without the grants (Fuller, Manski, and Wise 1980; and Manski and Wise 1983). This heavy reliance on Pell grants suggests the important role the program plays in opening up opportunities for students from a low-income background.

Grants from the School

The next most frequently used type of grant is that from the school's own funds (table 5-6). These grants come from numerous sources--individual, corporate, foundation, etc.--but are not merely funneled through the school's financial aid officer. The school usually has formal control of the funds, although the ultimate source often places restrictions on their allocation. The variety of purposes for which these awards were established cuts across ability, financial need, and special interest considerations so that one would not necessarily expect any relationship to family income, race/ethnicity, gender, or aptitude. Table 5-7 shows that this type of aid is heavily concentrated in 4-year schools and, among them, more heavily in private than in public schools.

College or university-based aid (College/University Grants and Scholarships plus Loans) is used by more than one-quarter of those who receive aid (table 5-6) and they form a very different group from that group that uses Pell grants. This source is used slightly more often by males than by females, among those who use any kind of grant (table 5-4). Within this group, it is used almost twice as much by white females as by other females and nearly one and one-half times as often by white males as by minority males. Both minority racial/ethnic groups tend to use this source of aid in the same proportion (among all those who use grants).

There is a sharp dividing line among family-income levels in the use of college-based aid. Students from families with incomes of less than $16,000 are less likely to receive college-based aid than are students from higher income families (table 5-5). And there is a leveling-off of the use of college-based aid in families with more than $20,000 in income. But lowest-income families receive this kind of aid least often. In that respect, these sources of aid supplement Pell grants.

Table 5-6—Percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by test quartile

Grants, Scholarships (% of those in test quartile category receiving aid who used specific source)	Test Quartile: Low		2nd		3rd		High		All	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	78.0	75.3	65.9	61.9	62.2	57.6	46.8	41.2	58.6	53.9
SEOG	14.0	14.7	13.5	16.4	17.9	17.7	13.6	12.5	14.8	14.9
ROTC	0.0	0.0	0.2	0.2	0.4	0.8	1.9	2.7	0.9	1.4
Social Security	16.1	14.0	12.5	15.8	12.7	14.1	11.7	14.5	12.7	14.6
Nursing	0.1	0.2	1.9	0.8	1.7	1.5	0.3	0.0	1.0	0.6
V.A. Survivors	4.1	4.8	1.1	1.2	1.5	2.2	2.8	3.7	2.3	3.0
VEAP	0.0	0.3	0.2	0.4	0.6	0.4	0.0	0.6	0.2	0.5
State Scholarship	8.6	6.7	11.5	12.0	13.8	12.7	21.6	21.1	15.9	15.3
College/University	6.3	4.9	15.2	11.9	17.6	15.0	36.6	31.4	23.6	19.9
Private Organizations	2.4	2.8	10.7	3.6	17.6	5.7	26.2	14.3	17.9	8.5
Voc. Rehab.	1.1	1.3	1.6	0.3	1.1	0.8	0.7	1.0	1.0	0.8
Unknown Source	3.4	3.0	5.1	6.2	3.7	2.4	3.3	4.5	3.8	4.1
Other	16.6	13.1	18.1	20.2	22.9	27.6	24.9	27.0	22.0	24.1
(None)	(61.4)		(55.9)		(58.9)		(46.6)		(54.4)	
Loans (% of those in test quartile category using loans who used specific source)										
NDSL	25.9	21.3	35.2	20.6	34.7	28.5	35.0	28.0	34.1	26.3
GSL	35.2	38.2	29.2	47.7	38.1	43.6	48.3	54.2	41.1	48.9
Nursing	0.5	2.3	1.1	1.2	2.3	0.7	0.8	0.5	1.2	0.8
State	10.7	6.2	7.5	6.8	8.0	10.8	11.5	11.1	9.8	9.9
College/University	3.0	2.9	4.0	5.4	4.6	4.0	6.0	4.5	5.0	4.4
Regular Bank										
Parents, Relatives	12.2	10.0	14.5	14.2	11.5	11.5	9.0	9.9	11.0	11.1
Unknown Source	12.2	14.3	10.4	13.8	9.4	10.3	6.0	6.9	8.2	9.6
Other	7.2	6.4	2.3	3.8	1.6	1.7	1.4	1.4	2.2	2.3
(None)	(75.7)		(69.7)		(66.9)		(54.6)		(64.6)	

Table 5-6 Continued

Family or Friends (% of those in test quartile category receiving aid from family or friends who used specific source)	Quartile: Low		2nd		3rd		High		All	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	93.5	85.4	94.1	93.2	97.0	93.4	94.9	93.9	95.2	92.8
Spouse	0.4	1.0	0.2	1.5	0.5	0.6	0.3	1.4	0.3	1.1
Other	8.0	10.7	6.7	8.2	5.5	7.5	10.8	10.9	8.3	9.4
(None)	(65.3)		(57.2)		(53.7)		(41.3)		(51.8)	
Own Resources (% of those in test quartile category using own resources who used specific source)										
Savings from Before	59.0	49.7	63.1	49.7	67.6	49.5	74.1	46.6	68.6	48.3
Earnings from Before	33.2	35.4	43.4	51.4	48.8	54.9	55.6	67.6	49.1	57.9
College Work Study	13.1	11.4	12.1	13.5	11.0	12.8	14.7	14.0	13.0	13.3
Assistantship	1.2	2.7	0.3	0.4	0.2	0.1	0.7	1.2	0.5	0.9
Earnings While Enrolled	25.0	24.8	28.3	27.4	31.7	35.2	29.8	37.6	29.7	33.8
(None)	(47.0)		(41.1)		(30.4)		(25.6)		(33.4)	

Table 5-7—Percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by type of school preferred

	Vocational Public		Vocational Private		2-Year Public		4-Year Public		4-Year Private		Multiple Public	
Grants, Scholarships	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	62.1	58.2	68.2	72.0	56.3	55.9	59.7	57.0	54.4	50.1	58.3	53.8
SEOG	6.8	7.8	35.3	34.2	7.1	7.6	15.1	15.5	25.4	22.2	9.4	10.6
ROTC	0.0	0.7	0.0	0.0	0.0	0.0	1.6	2.4	0.6	0.7	1.6	2.2
Social Security	25.5	18.2	10.3	12.1	16.8	16.2	10.9	14.2	12.8	13.2	9.6	12.8
Nursing	0.3	.7	3.5	3.8	1.0	0.1	0.3	0.1	0.9	0.6	3.3	1.3
V.A. Survivors	4.2	10.2	4.7	5.2	4.8	5.8	2.1	2.5	1.8	2.0	2.2	2.5
G.I. Bill	0.0	.7	0.0	0.0	.1	0.1	0.3	0.1	0.0	0.5	.3	0.5
State Scholarship	3.0	3.9	4.5	4.8	3.8	4.7	17.1	15.7	29.9	30.2	17.4	9.0
College/University	.6	1.2	0.0	0.0	9.6	6.7	21.6	17.1	53.2	48.8	18.6	13.6
Private Organizations	13.6	4.7	0.0	0.0	12.6	4.1	18.9	8.2	22.1	12.0	14.2	11.3
Voc. Rehab.	2.7	1.9	13.3	16.5	.1	0.0	.9	1.1	0.1	0.1	2.3	1.2
Unknown Source	5.2	7.6	13.1	11.2	4.5	2.7	3.8	5.1	5.4	5.8	5.0	6.9
Other	19.9	19.2	13.3	.8	17.9	21.1	24.1	25.8	20.7	17.2	21.3	27.1
(None)	(70.2)		(67.3)		(67.9)		(48.4)		(37.9)		(53.3)	
Loans												
NDSL	17.3	10.6	22.5	10.3	12.9	12.9	34.8	24.4	43.6	37.9	31.5	29.2
GSL	36.2	35.2	25.9	40.9	38.6	48.3	42.2	51.3	47.8	53.8	47.7	45.7
Nursing	0.9	0.0	0.0	4.9	2.9	1.8	.4	0.1	1.3	.6	4.3	1.1
State	4.1	10.6	10.6	8.1	9.2	11.1	11.1	11.5	8.4	8.8	10.5	9.9
College/University	6.9	.6	3.3	5.4	3.3	2.8	3.1	4.2	8.1	6.9	2.9	4.5
Regular Bank	7.1	22.7	25.4	21.1	10.1	11.6	10.0	11.3	9.6	10.0	8.8	10.3
Parents, Relatives	18.2	14.3	8.1	7.6	12.1	11.9	7.1	8.3	6.3	8.9	10.7	14.1
Unknown Source	5.6	6.6	7.1	7.2	13.6	2.7	.9	1.2	.2	.2	.3	4.1
Other	14.3	7.5	5.3	0.0	4.4	3.1	2.5	3.2	3.0	4.4	3.6	3.3
(None)	(79.0)		(56.6)		(86.0)		(59.7)		(41.5)		(57.3)	

Table 5-7 Continued

	Vocational Public		Vocational Private		2-Year Public		4-Year Public		4-Year Private		Multiple Public	
Friends Or Relatives	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	94.2	91.3	89.6	78.5	94.2	92.6	97.0	94.4	95.3	93.2	98.7	90.1
Spouse	0.0	.3	.8	0.0	0.0	0.9	0.1	1.2	0.0	.6	1.1	2.3
Other	6.6	11.0	10.3	1.5	7.9	10.0	5.8	6.7	10.5	11.1	8.8	9.0
(None)	(64.8)		(70.2)		(62.5)		(44.1)		(39.4)		(50.3)	
Own Resources												
Savings from Before	63.1	52.3	66.6	61.7	62.4	51.0	69.9	45.9	73.6	47.6	69.1	52.8
Earnings from Before	33.1	39.6	29.9	32.2	41.0	40.0	54.6	66.8	61.0	70.0	49.8	48.3
College Work Study	8.3	9.2	2.1	5.1	6.9	8.2	13.1	12.5	22.7	25.0	9.7	8.2
Assistantship	0.0	1.7	.4	0.0	.7	0.5	0.6	.9	.7	.8	0.0	.8
Other Earnings	37.3	44.8	32.5	30.2	41.9	41.7	24.5	31.3	21.4	26.7	31.2	37.2
(None)	(39.5)		(35.3)		(34.7)		(33.0)		(32.1)		(32.3)	

NOTE: 2-year private institutions and multiple private institutions are omitted because the sample size within most financing sources is too small to be reliable.

The relation of grants from the school's funds to academic performance suggests that academic record is an important criterion for awarding grants from the individual school. Students from the lowest test quartile who receive aid are unlikely to receive aid in this form. Students in the second or third test quartiles are about twice as likely as those in the lowest test quartile to use this kind of aid. Students in the top academic quartile are, in turn, more than twice as likely as those in the middle quartiles to receive this kind of aid.

These patterns we have just described are somewhat similar to those during the 1972-73 period (tables 5-8, 5-9, and 5-10). White students were slightly more likely than minorities to receive this kind of grant in 1972, but not in 1973. Higher aptitude students were much more likely to use it in both years. And there is not a strong pattern of use by family income. The principal difference between the 1972-73 and 1980-81 periods is that this source of grants was the single most frequently used source during the earlier period (table 5-9), when Pell grants were just beginning. The shift in reliance is quite interesting. In the earlier period about one quarter of all those who used grants used school-based funds. In 1980-81, the fraction using it is only a little over half as large. But this difference occurs because a larger percentage of all students were receiving some form of grant in 1980-81 than in 1972-73, not because a smaller percentage of all students are using school-based aid.

It is important to note in this connection that, to the extent that these student reports of use are accurate, in the earlier period school-based grants did not show a strong pattern of allocation according to family income. One might otherwise expect that the effect on disadvantaged students of cuts in Federal programs would, as a matter of course, be ameliorated by reallocation of school-based grants toward those prospective students with financial need. Not only does recent evidence noted in chapter 1 suggest that, if any trend exists, schools are moving toward paying even less attention to financial need than previously, but also the evidence from NLS '72 in table 5-10 suggests that, even before Pell grants, school-based aid was not allocated primarily according to financial need.

State Scholarships

State scholarships--the third most often used specific source of aid (table 5-6)--are a non-campus-based source for which financial need usually is not a primary criterion. Students often must meet academic minimum qualifications to receive this sort of aid. Thus, one would expect a weak relationship with family income and a stronger relationship with academic aptitude. The scholarships are used with greater relative frequency to attend private 4-year schools than public ones (table 5-7).

State scholarships are used by less than one-fifth of those who receive aid (table 5-6). These figures are consistent with an estimate by Gillespie and Carlson (1984) that 13 percent of all college students use State scholarships. Like college-based aid, State scholarships are used most often by whites (table 5-4). There is some tendency for the scholarships to be issued more often to low income students than to high income ones, but the relationship is quite weak and is really evident only in comparing the highest and lowest income brackets (table 5-5). There is a fairly strong pattern for higher aptitude students to receive grants from

this source more frequently than lower aptitude students (table 5-6). The pattern is not as pronounced, however, as that for school-based grants.

The more frequent use by whites and the strong association between use and higher academic aptitude is also characteristic of the earlier period, 1972-73 (tables 5-8 and 5-9). Gillespie and Carlson (1984) report that the percentage of students who use the source has increased from 8 percent in 1970-71 to 13 percent in 1980-81. Their figures are roughly consistent with those reported here. But the relative reliance on State scholarships among those who receive some form of grant is less in 1980-81 than it was in 1972-73, again because a larger fraction of all students is using grants now than in the earlier period. Moreover, the size of the average award has decreased in real terms since 1970-71. The average amount of a State scholarship award has fallen by nearly one-fourth in real purchasing power (from $1,074 of 1982 purchasing power in 1970-71 to $820 in 1980-81) (Gillespie and Carlson 1984, p. 16). The overall impression one gets of the allocation of State scholarship funds is that the program rewards those students who perform well academically according to standard criteria, without any attempt to offset social, intellectual, or economic disadvantages among students.

Supplemental Economic Opportunity Grants

SEOG grants are campus-based aid (allocated by school financial aid officers) designed to assist students from low-income families. One would expect a strong relationship between use and family income, but no necessary relationship with academic aptitude.

These are used by a significant fraction of those who use grants, about 15 percent (table 5-6). Among all students, about 7 percent use the source, an estimate that is close to that of Gillespie and Carlson (1984). SEOG grants are used slightly more often over the 2-year period considered as a whole than are grants from private organizations. This more frequent use occurs because, although aid from private organizations is slightly more frequent than SEOG in the first year after high school graduation, it is markedly less frequent during the second year (table 5-6). As one would expect, SEOG has a strong income component in its allocation (table 5-5) and no pattern at all by academic ability (table 5-6). Blacks use it much more often than Hispanics, who in turn use it slightly more often than whites (table 5-4).

This source of aid seems to be used more often now than in 1972-73 (tables 5-6 and 5-9). Because of the low frequency of use in the earlier period, a comparison of the relationship of income to use is difficult. But the general thrust of the data in table 5-10 suggest that use of the program followed its design as closely then as it does now, with lower-income students receiving the bulk of the assistance under the program. Unlike 1980-81, it appears that in 1972-73 blacks and Hispanics were about equally likely to use the program in 1972-73 (table 5-8). Both our data and those of Gillespie and Carlson (1984) suggest that the percentage of use among all students has about tripled between the early 1970s and the early 1980s. The average grant per recipient has just about held its own with inflation, being about $520 of 1982 purchasing power at both periods (Gillespie and Carlson 1984).

Table 5-8--Percent of NLS '72 respondents using different sources of financing postsecondary education, by race/ethnicity and gender

	Hispanic		Black		White		Males		Females	
	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74
Grants, Scholarships										
Pell	31.5	18.9	29.6	25.8	10.8	8.0	13.2	10.2	14.3	11.0
SEOG	8.5	13.2	7.1	18.5	2.3	3.4	2.9	5.2	3.6	6.1
ROTC	.4	.3	.4	.8	1.2	1.4	2.4	2.6	.1	.2
Social Security	5.6	5.8	7.8	5.5	9.3	7.0	6.9	6.5	10.6	7.0
Nursing	1.8	.8	.6	1.3	1.6	1.0	.2	0.0	2.6	1.9
V.A. Survivors	3.1	.9	1.7	1.4	3.2	3.0	2.6	2.6	3.2	2.7
G.I. Bill	.5	0.0	1.2	1.4	1.7	.9	1.9	1.4	1.1	.3
State Scholarships	10.3	16.9	12.4	17.2	22.4	19.6	18.9	18.8	22.1	20.0
College/University	21.9	26.8	23.6	26.0	24.8	23.1	24.4	25.5	25.0	22.8
Voc. Rehab.	.9		1.0		2.2		2.0		1.9	
LEEP	1.9		.6		.5		.9		.2	
Health Professions	1.6		.5		.4		.2		.6	
Other	29.0	15.3	11.1	13.5	26.8	13.5	22.9	12.7	27.2	15.0
(None)	(79.0)		(75.0)		(81.0)		(80.9)		(79.9)	
Loans										
NDSL	37.9	27.8	33.4	34.7	30.8	22.3	29.1	23.3	33.2	25.8
GSL	21.8	21.3	26.5	16.5	30.1	18.3	30.4	22.3	27.9	14.8
Nursing	1.3	1.2	1.1	2.1	1.2	1.7	.1	.2	2.0	2.8
State	5.4	0.0	5.2	4.8	8.1	6.5	7.1	6.0	8.0	5.7
College Loan	--	3.4	--	5.9	--	5.0	--	4.5	--	5.3
Bank	7.5	4.3	5.6	6.5	11.1	9.6	9.4	9.1	10.8	8.4
Parents, Relatives	--		--		--		--		--	
Health Professions	1.3		0.0		.2		.1		.5	
Other	0.0	6.1	0.0	3.2	.2	1.8	.1	3.1	.2	1.5
(None)	(85.1)		(80.2)		(88.8)		(89.2)		(86.8)	

Table 5-8 Continued

	Hispanic		Black		White		Males		Females	
	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74
Family or Friends										
Parents	79.8	40.6	75.6	44.4	84.2	56.2	83.7	56.7	83.1	53.1
Spouse	1.4	1.9	2.1	2.6	1.0	1.4	.6	.8	1.5	2.1
Other	4.5	6.1	8.5	8.7	4.4	4.5	3.9	5.6	5.5	4.5
(None)	(30.2)		(30.3)		(42.4)		(38.2)		(32.2)	
Own										
Savings	58.6	48.7	48.2	45.8	67.6	63.5	66.9	64.5	64.1	58.6
Work Study	15.0	11.6	22.9	18.9	6.9	7.6	6.6	6.6	10.7	10.9
Other	13.7	30.2	10.1	21.0	17.0	30.8	17.1	31.7	15.7	28.3
None	(37.6)		(36.4)		(46.8)		(51.3)		(48.8)	

Table 5-9—Percent of NLS '72 respondents using different sources of financing postsecondary education, by test quartile

	Low		Middle		High		All	
	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74	1972-73	1973-74
Grants, Scholarships								
Pell	21.9	19.7	15.3	13.3	10.4	6.7	13.8	10.6
SEOG	7.2	9.4	3.1	6.6	2.4	3.2	3.2	5.6
ROTC	0.0	.1	.4	.7	2.2	2.3	1.2	1.4
Social Security	10.8	7.0	9.9	7.2	7.3	6.3	8.8	6.8
Nursing	1.7	.7	1.3	1.0	1.5	1.1	1.4	1.0
V.A. Survivors	4.8	2.7	3.3	2.9	1.7	2.3	2.9	2.6
G.I. Bill	2.3	1.9	2.2	.7	.8	.7	1.5	.9
State Scholarships	9.2	10.5	14.5	14.2	27.8	25.3	20.5	19.4
College/University	15.0	15.9	19.5	19.7	31.9	30.1	24.7	24.1
Voc. Rehab.	6.2		2.3		.5		2.0	
LEEP	1.8		.7		.1		.6	
Health Professions	.8		.4		.4		.4	
Other	15.4	10.8	25.1	14.7	27.5	14.0	25.2	13.9
(None)	(91.1)		(83.5)		(65.8)		(80.4)	
Loans								
NDSL	23.4	23.7	24.8	22.7	40.6	27.2	31.3	24.7
GSL	30.8	16.8	31.7	18.1	25.9	18.5	29.0	18.2
Nursing	.5	1.6	1.2	1.7	1.4	1.7	1.1	1.6
State	7.5	3.6	7.0	4.4	8.8	8.3	7.6	5.9
College Loan	—	5.4	—	4.3	—	5.4	—	5.0
Band	6.5	6.4	11.9	9.7	9.0	8.0	10.2	8.7
Parents, Relatives	—		—		—		—	
Health Professions	.5		.1		.4		.3	
Other	0.0	5.3	.4	3.0	—	.7	.2	2.2
(None)	(94.0)		(88.3)		(81.7)		(88.0)	
Family or Friends								
Parents	78.2	36.1	82.5	49.4	85.8	64.9	83.4	54.8
Spouse	2.9	1.3	1.2	1.2	.5	1.6	1.1	1.4
Other	6.6	4.9	5.0	4.7	4.0	5.4	4.7	5.0
(None)	(82.6)		(61.4)		(35.4)		(59.8)	
Own								
Savings	53.8	42.3	63.4	57.5	71.8	72.0	65.6	61.8
Work Study	10.8	8.0	8.0	8.1	8.5	9.3	8.5	8.6
Other	16.1	23.3	15.8	28.2	17.2	33.7	16.4	34.8
None	(78.4)		(56.2)		(31.3)		(55.0)	

It is interesting that SEOG grants are reported to be used by a larger fraction of students attending 4-year private schools than by those attending 4-year public schools. It is also interesting to note the relatively very high frequency of use among students attending private vocational schools (table 5-7).

Aid from Private Organizations

Like school-based aid, aid from private organizations goes most often to students from higher income families (table 5-5). Unlike school-based aid, it is distributed more evenly across a wider variety of institutions (table 5-7). Such aid is used only half as much overall in 1981-82 as in 1980-81 (table 5-6). This suggests that much of the aid from private organizations is in the form of small grants of short duration that primarily aid a student in starting a postsecondary school experience. The grants are much more likely to go to whites than to other students (table 5-4). Finally, these grants are strongly related to academic performance. The ratio of use in the high test quartile to use in the lowest quartile is nearly 10:1 (table 5-6).

Changes in use between 1972-73 and 1980-81 are impossible to gauge because the NLS '72 questionnaire did not have this category listed (table 5-9).

Social Security Benefits

The last of the specific sources of grants that is used by a sizable group is Social Security benefits. This is another non-campus-based source of aid and one that is not tied to a need criterion. These benefits were used by more than 10 percent of those students who received aid. Despite the absence of a need criterion, this was a source of aid on which lower income students relied more heavily than higher income students (table 5-5). But its use does not show the kind of race/gender pattern associated with Pell grants or SEOG (table 5-4). Nor does its use parallel that of aid sources that are awarded primarily based on academic performance. It is used with about equal frequency in all test quartiles (table 5-6). Use is most frequent (relatively) at public vocational or 2-year institutions. There is no clear, consistent pattern in both years in use among racial/ ethnic groups (table 5-4).

In 1972-73 it was used most often by females and by whites, just as in 1980-81. The patterns of use by income and aptitude are also similar at both times.

Other Aid Programs

Each of four specific grant programs identified by HS&B are used by about 1 percent of those receiving grants: ROTC scholarships, nursing scholarships, V.A. benefits, G.I. Bill aid, and vocational rehabilitation. Use is not frequent enough to reveal any patterns by race/gender, income, or ability.

Table 5-10—Percent of NLS '72 respondents using different sources of financing postsecondary education, by levels of family income

Grants, 1972-73 Scholarships	<$2,999	$3,000 -5,999	$6,000 -7,499	$7,500 -8,999	$9,000 -10,499	$10,500 -11,999	$12,000 -13,499	$13,500 -14,999	$15,000 -17,999	$18,000 and up
Pell	38.7	25.9	18.2	19.1	11.5	9.4	5.0	5.2	6.5	3.9
SEOG	9.2	6.2	6.2	3.6	1.6	.8	1.7	0.0	1.9	.5
ROTC	0.0	.7	.8	.8	.4	.9	1.8	2.8	3.0	3.1
Social Security	14.4	16.1	10.5	8.7	7.0	7.8	6.0	4.8	6.2	7.2
Nursing	.9	2.9	1.3	2.4	.9	2.8	2.3	1.0	0.0	.1
V.A. Survivors	3.6	4.2	3.9	2.1	2.1	5.3	1.7	1.1	1.0	1.0
G.I. Bill	1.7	1.5	3.6	1.4	1.5	1.5	.5	.4	1.6	1.4
State Scholarships	13.6	18.0	21.0	23.5	30.8	25.1	22.3	19.5	20.2	13.2
College/University	24.4	21.5	22.2	22.0	24.3	27.4	25.2	28.8	29.0	29.9
Voc. Rehab.	.8	2.8	1.7	1.4	1.5	.8	2.1	3.9	1.0	.6
LEEP	.4	.9	.7	2.0	.2	0.0	0.0	0.0	0.0	.7
Health Professions	.3	1.1	.5	.5	0.0	.5	0.0	0.0	.1	.4
Other	17.0	21.3	27.5	22.2	28.2	26.8	27.1	32.2	27.9	22.8
Loans										
NDSL	40.3	38.2	35.9	37.1	33.9	35.1	32.6	27.4	17.0	8.8
GSL	27.0	27.9	30.2	25.3	27.6	33.1	29.7	34.7	39.2	27.7
Nursing	0.0	2.2	1.9	2.3	.2	1.1	0.0	3.4	.5	.6
State	6.5	7.7	3.6	6.7	8.3	5.1	8.5	9.1	8.3	15.7
College Loan Bank	1.9	5.4	9.4	5.8	10.0	9.4	9.5	12.9	10.5	19.3
Parents, Relatives										
Other	0.0	0.0	0.0	0.0	0.0	0.0	.7	.6	.9	.2
Health Professions	0.0	.6	.4	.6	0.0	.7	0.0	0.0	0.0	0.0

Table 5-10 Continued

Family or Friends	1972-73	<$2,999	$3,000 -5,999	$6,000 -7,499	$7,500 -8,999	$9,000 -10,499	$10,500 -11,999	$12,000 -13,499	$13,500 -14,999	$15,000 -17,999	$18,000 and up
Parents		64.7	74.6	80.6	81.8	82.8	83.2	83.8	88.2	89.0	89.0
Spouse		4.5	3.9	1.4	.9	1.6	1.9	.6	1.1	.4	.8
Other		14.9	8.5	7.3	5.3	6.4	2.9	5.2	7.0	4.4	1.7
Own											
Savings		48.5	57.8	66.0	66.8	67.7	68.1	63.0	69.2	71.0	70.3
Work Study		24.8	20.3	14.7	.5	10.8	7.3	4.7	7.2	4.1	2.7
Other		11.4	14.9	15.6	17.4	19.8	15.4	20.8	17.0	19.0	14.6

Table 5-10 Continued

Grants, 1973-74 Scholarships	<$2,999	$3,000 -5,999	$6,000 -7,499	$7,500 -8,999	$9,000 -10,499	$10,500 -11,999	$12,000 -13,499	$13,500 -14,999	$15,000 -17,999	$18,000 and up
Pell	23.8	20.6	14.0	17.3	8.6	3.6	7.6	3.9	2.4	2.5
SEOG	14.6	11.7	8.3	5.8	5.2	2.6	2.4	1.4	.9	1.1
ROTC	1.6	.5	.8	1.2	.5	.2	.9	1.2	4.2	3.8
Social Security	9.8	12.6	7.1	7.0	3.1	5.5	5.8	2.2	7.6	3.5
Nursing	.7	1.1	.7	1.9	.2	1.9	1.6	1.4	.2	.9
V.A. Survivors	5.6	5.0	2.7	2.6	2.0	3.6	.8	0.0	2.2	2.3
G.I. Bill	1.2	1.0	2.5	.2	.9	2.2	0.0	0.0	.6	.4
State Scholarship	14.0	16.5	18.2	25.3	28.3	23.6	21.8	19.4	15.7	12.1
College/University	19.1	19.5	20.9	25.1	24.0	26.4	26.2	26.6	22.3	27.9
Voc. Rehab.										
LEEP										
Health Professions										
Other	11.4	15.5	13.9	13.2	8.4	13.0	11.7	21.7	14.2	17.2
(None)	(75.5)	(75.0)	(77.8)	(76.5)	(77.8)	(80.9)	(79.1)	(80.7)	(80.5)	(85.3)
Loans										
NDSL	34.6	35.4	31.9	28.9	27.3	21.0	23.0	13.4	13.9	7.9
GSL	14.6	14.5	16.2	17.8	18.1	18.9	21.5	27.0	23.3	18.7
Nursing	2.2	2.8	.4	2.4	1.4	2.0	.9	3.1	.9	0.0
State	2.1	4.0	5.0	3.2	7.2	5.6	5.6	10.7	10.2	11.3
College	6.5	4.0	5.1	4.1	3.0	3.9	7.0	7.1	4.5	5.6
Bank	3.9	2.9	9.4	7.0	9.0	7.4	7.7	11.3	11.0	19.2
Parents, Relatives										
Health Professions										
Other	2.0	2.9	3.8	3.8	1.6	4.8	2.4	0.0	1.7	.9
(None)	(84.9)	(85.6)	(85.9)	(84.1)	(85.2)	(88.2)	(87.6)	(87.0)	(87.6)	(93.5)

Table 5-10 Continued

Family or Friends	1973-74	<$2,999	$3,000 -5,999	$6,000 -7,499	$7,500 -8,999	$9,000 -10,499	$10,500 -11,999	$12,000 -13,499	$13,500 -14,999	$15,000 -17,999	$18,000 and up
Parents		35.6	36.9	44.0	44.1	50.3	53.9	56.1	56.0	56.6	67.5
Spouse		2.4	3.1	1.8	2.4	1.3	2.0	.6	1.7	2.1	.9
Other		13.3	8.3	4.4	5.6	6.4	4.3	4.4	4.2	5.6	2.7
Own											
Savings		50.0	52.7	55.4	59.2	61.9	61.3	66.1	67.6	62.5	67.3
Work Study		19.6	14.2	15.2	12.7	12.0	6.0	6.8	5.5	4.7	3.2
Other		23.7	28.3	27.4	26.5	32.5	32.5	32.2	31.6	33.4	28.9

Federally Guaranteed Student Loans

The most frequently used loan program is the Federally Guaranteed Student Loan. In size, the program has grown from $292 million in 1973 to $2.5 billion by 1981 (CES 1982a). This is a non-campus-based program with income-eligibility limits that were raised in 1980 with passage of the Middle Income Student Assistance Act (MISAA), then lowered to a new level in 1982. Interest payments are implicitly subsidized by being limited while the student is in school, and those subsidies have recently been limited for students from high-income families. The most recent changes are of interest not because they will have affected the data that are reported here but because they imply that changes in use will already have occurred by the time this report is written. To the extent that this report shows both what usage of the program was like just before the most recent changes and what usage was like prior to MISAA, one may expect that current usage might more nearly approximate pre-MISAA usage.

The GSL program is used by more than two out of every five students who use loans, according to student reports (table 5-6). It is used often at all types of institutions, but slightly more often at 4-year private schools. It is used in 1980-81 more frequently by students from high income families than those from low income families, and the fraction of loan recipients who use it rises rather steadily and gradually with income (table 5-5). This pattern is consistent with findings of Astin (1982), who notes that the fraction of students using GSL's soared from 10 percent in 1974 to 26 percent after MISAA, with the major increase coinciding with removal of income restrictions. There is a slight tendency for higher aptitude students to use these loans more often than low aptitude students (table 5-6). But that tendency applied only for the first year, 1980-81, and is not apparent at all in the second year after high school graduation. The race/gender patterns of use show that whites who receive loans are more likely to use this type of loan than are Hispanics, who in turn use it more often than blacks (table 5-4).

These types of loans are interesting in three respects. The first has already been noted but is worth restatement: the GSL program serves high-income students at least as often (relatively) as it does low-income students.

The second is that the real purchasing power of the average GSL loan has remained relatively stable since 1970-71, at about $2,400 of 1982 purchasing power (Gillespie and Carlson 1984). This stability is a consequence of the fact that the loans are negotiated to meet expenses and do not require Congressional action to change limits.

The third is that GSL is about the only source of financing (other than a student's own resources, such as earnings or savings) that is used more often in the second year after high school graduation than in the first (table 5-6). About 49 percent of those receiving loans receive GSL loans in the second year, compared to about 41 percent who receive them in the first year. This pattern suggests that GSL's are used more often to continue a postsecondary program that was started a year earlier perhaps using short-term scholarship or aid funds.

Before leaving this discussion of the GSL program, however, we must remind readers that students in HS&B seem to be substantially underreporting use of GSLs. A detailed study by NORC, in draft form as this report is being written, suggests that the underreporting problem may be severe.

Thus, the observations we have made should be accompanied by a strong caveat about reading too much into figures that seem to have a large error component (NORC 1984).

National Direct Student Loans (NDSL)

National Direct Student Loans are campus-based aid, administered by school financial aid officers, with 90 percent of loan capital provided by the Federal Government and with interest payments heavily subsidized. The program is designed to allocate the loans according to financial need.

NDSL loans are reported to be the second most frequently used type of loan (table 5-6). Nearly one-third of those who receive loans say that they use NDSL in 1980-81. Outlays under the program have risen since 1970-71 from $240 million to $695 million by 1980-81. In real terms, the average amount of a loan fell by about one-fourth, from $1,292 to $951 of constant 1982 purchasing power (Gillespie and Carlson 1984).

These loans serve a different set of students from that served by GSL loans. The pattern of usage by income levels (during the first year) is almost directly the reverse of the pattern for GSL: nearly 60 percent of students from low income families who used loans used NDSL in the first year, compared to only about 20 percent of students from the highest income bracket who used loans. NDSL usage during the second year is less varied by income than during the first year. The range is from 40 percent to 15 percent (table 5-5).

NDSL loans further contrast with GSL's in that white males and females and Hispanic females are least likely to use NDSL (table 5-4). They are, however, similar to GSL's in that they are used most often to attend 4-year institutions, especially private ones (table 5-7).

Between 1972-73 and 1980-81, the overall fraction of students receiving loans who use NDSL has remained about the same (tables 5-6 and 5-9). Other sources are nearly in agreement with this result. They suggest that the fraction of all students using NDSL has increased, but only slightly. Jackson (1980), using CIRP data says that usage increased from 6.0 percent of all students in 1974 to about 7.5 percent in 1977. Gillespie and Carlson (1984) calculate increases from 7 to 9 percent between 1970-71 and 1980-81.

The program's funds seem to be allocated broadly according to need at both 1972-73 and 1980-81 (tables 5-5 and 5-10). There is also little change among males in the relative participation of racial/ethnic groups in the program. Female rates exhibit much more variability between 1972-73 and 1980-81 (tables 5-4 and 5-8). One major difference between 1972-73 and 1980-81 is in the pattern of distribution by aptitude. In 1980-81, the lowest aptitude quartile is less likely than others to participate in the program; in 1972-73, the highest aptitude quartile is much more likely than the others to participate (tables 5-6 and 5-9).

Regular Bank Loans, State Loans, and Loans from Parents or Relatives

These three kinds of loans are non-campus-based and are used with about equal frequency, by about 10 percent of those receiving loans. These loans are also similar in that there is no clear pattern of use by

income, academic ability, or race/gender and no clear reason to expect a pattern, since there is direct policy control only over State loans. Whites are slightly more likely to use State loans (table 5-4) (as they were also more likely to receive State grants), and students from families with income in the range of $12,000 to $16,000 are more likely to borrow from parents, friends, or relatives (table 5-5). But otherwise there are not systematic differences by race/gender, income, or aptitude in the use of these kinds of loans.

The patterns of bank loans by income and race/ethnicity are different in 1972-73 from what they were in 1980-81. There is a tendency for higher income families to be more likely than lower income families to have regular bank loans in the 1972-73 period. The pattern is not continuous and strong in each possible comparison of adjacent income categories. But one's overall impression from the trend in percentages is that higher income families are more likely to have bank loans in the 1972-73 period (tables 5-5 and 5-10). White students are also more likely than others in the earlier period to have regular bank loans. In the later period, race/gender groups vary in frequency of use without there being a clear pattern in the frequency of having bank loans (tables 5-4 and 5-8).

Our data coding for the NLS '72 grouped parents' loans with aid from friends and relatives, which is discussed later. That explains the blank entries in the tables for NLS '72 data for that line.

Other Loans

Only two other specific types of loans were identified by HS&B, nursing loans and loans by the school itself. Nursing loans show little pattern by aptitude or income, but females are more likely than males to use nursing loans.

College or university loans are more nearly based on a need criterion than are other sources of loans except NDSL. We reach that conclusion because the percentage of those using loans who receive loans from the school itself falls gradually as income rises, starting from income levels above $7,000 (table 5-5). There is also a performance criterion, as these loans are more frequent in the highest test quartile than in the lowest (table 5-6). But the usage rate is so small that the differences do not meet the normal statistical criteria for being truly different.

Comparing college or university loans over time is difficult because the first follow-up questionnaire for NLS '72 did not include that category separately. Hence the missing entries in tables 5-8 through 5-10. But the comparisons between 1973-74 and 1981-82 show that need was not a factor in their allocation in 1973-74. Out of nine comparisons of adjacent income levels, as one moves from lower incomes to higher ones, there are five decreases in usage rates and four increases. The highest rates of use are in upper middle income ranges of $12,000 to $15,000. The rates of use in the two highest income ranges fall between the rates of use in the two lowest income ranges (table 5-10). There is no tendency whatsoever for aid use to fall consistently as income increases, as one would expect if need were a factor in its allocation.

Loans from unknown sources or from sources not specifically identified in the questionnaire account for about 7 percent of those receiving loans. No clear or interpretable patterns of use emerge for those loans.

Aid from Relatives or Friends

Aid from relatives or friends overwhelmingly means aid from parents, more so in 1980-81 than in 1972-73 (tables 5-6 and 5-9). In the more recent period 9 out of 10 respondents who use aid from relatives or friends list parents as one of the sources (table 5-6). In the earlier period the figure was closer to 80 percent (table 5-9). Expressed as a percentage of all those who attend postsecondary schools, however, both HS&B and NLS '72 may understate the frequency of use of parents' aid. In 1972-73, NLS '72 says that only 40 percent of attendees used aid from family or friends. In 1980-81, the percentage was closer to 50 percent. But the level of the reliance on parental aid shown in both HS&B and NLS '72 is much lower than reported by Astin (1982). Astin's figure includes borrowing as well as aid, where the HS&B figures put borrowing in a separate category. Nevertheless, Astin finds that 80 percent of those attending in 1974 to 69 percent in 1981 rely on parental aid. In view of these potentially substantial understatements, further discussion of parental aid is not productive.

Aid from one's spouse is so infrequent in these data that it can be disregarded. It is not a significant aspect of the financing for most people in the first 2 years out of high school.

Own Savings from Before Starting Postsecondary Education

Savings accumulated before starting postsecondary education and earnings during periods when the student was not enrolled in postsecondary education are the two most often used own sources of financing. But they follow very different patterns of use. Own saving is used more often in the first year than in the second year by most students. In contrast, own earning is used more often in the second year than in the first. These patterns conform to expectations: students use up part or all of their savings in the first year and come to rely more heavily on (usually summer) earnings in the second year.

In the first year savings accumulated prior to taking classes is generally used more often by those with higher incomes, although the lowest income level provides an exception to this usage pattern (table 5-5). Prior savings is used more often in the first year by whites than by other racial/ethnic groups. It is also used more often in the first year by those with higher test scores. In both respects, 1972-73 and 1980-81 are similar (tables 5-4, 5-6, 5-8, and 5-9). In the second year, however, there are no clear or even vaguely suggested patterns of differences in usage rates among these groups.

Nearly half of those who used their own resources used prior savings in the second year. Despite depletion of savings, therefore, it remains a significant source of financing even in the second year for all groups, regardless of income or academic ability.

The importance of own earnings (received while enrolled or while not enrolled) grows between the first and second years. It grows by enough that earnings while not enrolled (usually summer or other vacation earnings) is a more often used source by more students in the second year than is own savings. In contrast to own savings, in both years own

earnings is used rather differently by various racial/ethnic and ability groups. Within gender, when both categories of earnings are considered together, whites use earnings more often than Hispanics, who in turn use earnings more often than blacks. Within racial/ethnic groups, no clear pattern of difference by gender emerges. This racial/ethnic pattern is unlikely to be attributable to income differences by race/ethnicity, since differences in use of earnings by income show no clear pattern. Also interesting is the fact that substantial differences exist across levels of academic ability. Higher ability students more often report using earnings while not enrolled than do lower ability students, and that relative pattern is found in both 1980-81 and 1981-82.

College Work-Study

The Federal College Work-Study program is a campus-based aid source that is designed to be allocated according to need. The government and the institution share the expense, with the government's share not to exceed 80 percent.

This category on the questionnaire is among those most likely to be misunderstood by respondents. As with Federally guaranteed loans, the students may not realize the formal nature of the program that is providing their funds. Furthermore, very similar tasks may be performed by students paid from Work-Study funds and other students paid entirely from the school's operations and maintenance budget. It is likely, therefore, that students may confuse earnings and Work-Study and mark one when they should have marked the other.

Nevertheless, the fraction of students who use own earnings or savings who report being in a College Work-Study program in 1980-81 is very close to the percentage reported by Gillespie and Carlson (1984). The Gillespie and Carlson figure of 9 percent is very nearly equal to 13 percent (the percentage of those using own sources who report being in College Work-Study programs) of two-thirds (the percentage of students who use own sources of financing).

The usage of the program is consistent with its design. Students from families with less than $12,000 of income in 1979 used College Work-Study much more often than did those from families with higher incomes (table 5-5). An even stronger inverse relationship between income and participation in this program is also evident in the NLS '72 data. The program is used about twice as often at private 4-year institutions as at public ones (table 5-7). The program was also used much more often both in 1980-81 and in 1972-73 by blacks than by whites or Hispanics (tables 5-4 and 5-8). This contrasts strongly with the use of earnings while enrolled, which is used much less often by blacks than by others for both periods.

Assistantships and Other Earnings While Enrolled

Of the other two sources of own income, earnings while enrolled in classes is both the most-often cited and the least specifically defined. Assistantships are used by only a very small fraction of those using their own funds, less than 1 percent.

CHAPTER 6

CONCLUSIONS AND IMPLICATIONS FOR PUBLIC POLICY

We began this report with a discussion of three broad policy areas that are of concern to students, providers of education, and educational policymakers. In the first area, we noted that equity in access to postsecondary education has been a primary goal of Federal educational policy. The goal has been pursued through a combination of student aid programs and legislative commitments to equal access. Recent changes in aid and reports emphasizing the need for rigor and quality in American education, have shifted the emphasis in public policy debates away from the equal access issue. But equality of access remains an important concern.

This emphasis on educational excellence is the second policy area of interest. Panels from various sources, including a Presidential commission, have criticized American education for lacking rigor and effectiveness in promoting verbal and technical competence. At both the secondary and postsecondary levels, students are said to be avoiding rigorous and challenging courses to a degree that threatens the nation's future.

The third policy area concerns projected shifts in both the scale and distribution of postsecondary enrollments, shifts that threaten to compel painful adjustments in the provision of postsecondary education. The concerns include the overall level of student enrollment, the future of private postsecondary education, and shifts away from 4-year and toward 2-year institutions.

After noting these areas of policy concern, we emphasized the particular usefulness of the HS&B and NLS '72 data sets in addressing those issues. We pointed to the longitudinal character of the data and the broad range of questions included in the surveys as creating special advantages for these data sets in analyzing those policy issues.

In summarizing the results of the analyses reported here and drawing conclusions for policy, we follow two tracks that correspond to the policy concerns on the one hand and the usefulness of the data on the other hand. We first illustrate the particular appropriateness of the data for these analyses and provide a very broad overview of the most important findings in these analyses by reviewing the results for a single subgroup of the data. That subgroup--the high aptitude quartile--is of great interest to policymakers both because it is the test quartile with the largest representation among postsecondary students and because it is the group that is usually thought to be able to benefit the most from postsecondary education. The second track is to review the results within the analyses to show what they contribute to the understanding and eventual resolution of the policy issues raised in chapter 1.

Patterns Among High Aptitude Students

The HS&B data show that students from the high aptitude quartile are more likely to aspire to a 4-year college degree and more than twice as likely as students from the second highest quartile to expect to pursue graduate education (table 2-2). They are also much less likely than other students to plan to delay continuing their education after high school graduation (table 2-6). But between 1972 and 1980 these students changed

the pattern of their educational expectations. In 1972, 53 percent of them expected to acquire 4-year degrees without continuing to graduate education. An additional 24 percent expected to continue their education beyond the 4-year degree. By 1980, however, only 36 percent expected to attain only the bachelor's degree while 43 percent expected to go beyond that (tables 2-2 and 2-3). Note that the total percentage aspiring to at least a 4-year degree is nearly the same in 1972 and 1980. It is the distribution between 4-year degree only and higher educational expectations that has shown the important shift. For the best students, a 4-year degree is no longer sufficient to meet their goals.

Not only do these high aptitude students have higher educational expectations but those with high aptitude whose expectations are below the average for the quartile are more likely to increase their level of educational expectations during the first 2 years following their high school graduation (table 2-13). If they originally aspired only to high school graduation or to college below the level of the bachelor's degree, they were more likely than others to revise those expectations upward. In concert with those tendencies they were also least likely to change their educational expectations when they expected as seniors to attain a 4-year degree, and they were least likely to lower expectations when they originally expected to pursue graduate education.

These high aptitude students not only aimed higher, they actually attended postsecondary schools more often and were relatively more successful in fulfilling their plans for postsecondary education, at least during the first 2 years after high school graduation. Almost 80 percent of these students attended for 6 months or more during the 2 years covered by the follow-up, compared to about 61 percent of the next higher test quartile (tables 3-1, 3-2, 3-3, 3-10 and 3-11). This high rate of postsecondary enrollment does not reflect a change over the decade in enrollment tendencies among these students. About the same percentage of this group was enrolled in 1980 and 1972. But it is interesting to note that enrollment for these students was higher in the second year after high school during the more recent period than it was during the earlier period. That is, the reduction in enrollment rates between 1980 and 1981 (1.8 percent) is smaller for the high aptitude students than was the reduction in the corresponding period between 1972 and 1973 (7.1 percent) (table 3-7). These figures suggest a higher continuation rate in postsecondary schools now than in 1972 for high aptitude students. This finding should be relatively encouraging to those who expect colleges to provide the education that is needed to help the country compete economically with the rest of the world. It suggests that, although the best students are not attending colleges more often right after high school graduation than they did a decade ago, more of them seem to be staying in the school longer.

This higher attendance rate for these higher aptitude students is found among both males and females (table 3-5), among all three racial/ethnic groups that we studied (table 3-5), among all income levels (3-9), and at all levels of socioeconomic background (3-4). It is also accompanied by higher rates of application to postsecondary institutions and (except for an insignificant difference with the next lower quartile) higher rates of attendance among applicants (tables 3-1, 3-2, 3-3, 3-10 and 3-11).

High aptitude students are the most likely group to attend 4-year colleges or universities and the least likely to attend vocational schools

(table 4-1). The highest and lowest test quartiles attended 2-year schools about equally often. These highly-able students were also both more likely than others to attend private rather than public 4-year institutions (table 4-1) and less likely than other students to a attend 4-year institution on a part-time basis (table 4-1).

In terms of meeting their plans for taking academic courses at 4-year institutions, these high aptitude students are more likely than others to fulfill their plans (at least to the extent that they can within this 2-year period) (table 4-8). They are as likely as others to attend junior colleges for academic courses, given that they originally as seniors expected to take academic courses at junior colleges (table 4-8). They are also about as likely as others to act consistently with their expectations in attending trade schools or college at below the level of the bachelor's degree (tables 4-8 and 4-12). High aptitude students are relatively substantially more likely than lower aptitude students to fulfill plans for attending college at any level (table 4-8). They are also at least 10 percent more likel than the third quartile and anywhere from 20 to 40 percent more likely than the second test quartile to have a pattern of attendance that is consistent with their plans for graduate education (table 4-12). These data show that, whatever their initial level of educational expectations, students from the top aptitude quartile are at least as likely as other students to fulfill or act consistently with their educational expectations.

In financing their postsecondary education, these high aptitude students are relatively more likely than other students to use loans. They are also more likely to report using grants or scholarships, their own earnings or savings, and aid from friends or relatives (table 5-1). But they are the least likely of all aptitude levels to be fully dependent on scholarship (table 5-2), on aid from friends or relatives, or on their own earnings. These results suggest that these students use a wider variety of sources of financing than their counterparts from other levels of aptitude. High aptitude students also differ from other students in their use of specific sources of financing. They are less likely to use Pell grants than are all other students (table 5-6). But they were more likely, in both 1972-73 and in 1980-81, to use State scholarships, college or university grants, and private grants than were students of lower aptitude. They were more likely to use guaranteed students loans in 1980, but in 1972 (table 5-9) they were not more likely than others to use them. This last relationship is a result of the MISAA and the correlation between family income and student aptitude test scores.

Overall, we may offer a picture of the highest aptitude student group. They are more likely to expect to attend college, especially beyond the bachelor's degree, and they are more likely to act consistently with those expectations. They are more likely than other students to select private 4-year institutions (although, like all students they are more likely to select public schools than private ones). And they are more likely to use assistance from parents or grants from State or school sources to finance their education. This is not a group that is heavily dependent on Federal sources of aid or that, presumably, would be severely hurt by reductions in Federal student aid programs.

Equity in Access

The second track for our review and summary of results explores each of the three main areas of policy concern that we noted at the beginning of the chapter. The first is equity in access to postsecondary education.

The results from this examination of HS&B data allow us to address four aspects of concern about equity:

- Overall attendance and expectations
- Differences by gender
- Differences by race/ethnicity
- Possible disadvantages of lower-middle income students

Overall Attendance and Expectations

First, overall equity in access is indicated by whether enrollment varies in an appropriate way with some policy criterion. In access to postsecondary education, one criterion that may be selected, but certainly not the only criterion, is that all students who want to attend a post-secondary school and who can benefit from it enough to warrant the full cost of the schooling should be able to attend without barriers (such as insufficient family income) that are unrelated to their capacity to benefit from the experience. This criterion suggests that, for the data in HS&B, there is a presumption that variations in access by race/ethnicity, gender, family income, SES, or region are inequitable because these variables should bear no necessary relation to capacity to benefit from higher education. In contrast, differences in access by academic ability or aptitude carry a presumption of equity, since one expects students with higher aptitude to be able, on average, to benefit more from a postsecondary education than students with lower aptitude. Whether any one specific measure of aptitude is the best or most accurate is always open to question, of course. But for the sake of the discussion here we accept the aptitude test scores associated with the HS&B and NLS '72 data as good measures of academic ability or aptitude, while at the same time we acknowledge that no single standard of equity covers all policy concerns and that no single scale can be a complete measure of equity in access.

With these reservations, we note that the analyses reported here are consistent with the position that there exists a substantial degree of equity in access to the American postsecondary educational system, but that while that equity may have improved in some respects over the last decade, it has not improved in other respects.

The composite aptitude test score is a stronger discriminator of both attendance and aspirations than is socioeconomic status, which in turn is a stronger discriminator than family income. The difference in rates of postsecondary attendance between the lowest and highest test quartile are larger than the corresponding difference for socioeconomic status, which in turn is larger than the difference among income categories. For each of these three indicators, however, each successively higher category has a larger percentage who attend for at least 6 months than does the immediately preceding category. Thus, higher aptitude, SES, and income are all associated with a greater likelihood of postsecondary attendance. But aptitude produces greater changes as one moves from the lowest to the highest category.

The slightly greater impact of aptitude stands out more sharply when the SES-attendance and income-attendance relation ships are controlled for aptitude. For instance, academic performance in the top quartile makes one more likely to attend than anyone scoring in the bottom quartile, even if the latter student comes from a family with a high SES background. Nevertheless, socioeconomic status remains a powerful influence. Among those students with similar test scores, those from a higher SES background consistently attend postsecondary schools more frequently than those from a lower SES background.

The data tell a similar story regarding student ability and parental income. The likelihood of an individual attending for at least six months increases steadily with either higher test scores or higher family income. But attendance rates seem to be more responsive to changes in academic performance than to changes in family income. Within every income level, higher test quartiles have higher rates of attendance, and the differences in moving from one test level to another are usually larger than would be expected if the differences were not systematic. In contrast, there is not nearly as consistent a pattern for successively higher incomes to produce higher attendance rates.

Although we did not analyze the data from NLS '72 in as much detail as we did that for HS&B, the general impression that the comparisons over time provide is similar to that from HS&B. Several of the studies reviewed in chapter 1 have also suggested that, on closer examination, similar patterns of equity in access prevailed in 1972. We will discuss shortly some of the particular areas in which differences exist between the two periods.

These findings that aptitude, at least as measured here, is a stronger indicator of postsecondary access than are SES or family income is consistent with the view that, although access may not be completely equitable, there exists a strong element of equity in it in the last decade. To detect elements of inequitable access, we have to review in more detail the other three aspects of equity that we referred to earlier: gender and racial/ethnic patterns of access, and the access of children from lower middle income families.

Differences by Gender

Because females have traditionally been less likely to pursue postsecondary education and because there seems to be no reason to expect systematic differences by gender in academic aptitude[13] or in the background factors such as SES or family income that are associated with postsecondary attendance, equal rates of attendance by gender are the presumptive standard for judging gender equity.

The HS&B data show that, in a substantial change from 1972, females are now in the majority among recent high school graduates pursuing postsecondary education. It appeats to be safe to conclude that females no longer face obstacles in postsecondary access that prevent them from attending at least as frequently as males. What differences exist seem to be fundamentally related to gender roles and attitudes because they are quite similar within each of the three major racial/ethnic groups and they do not disappear when one controls for socioeconomic background (SES) or academic aptitude (tables 3-5 and 3-6).

That females are in the majority among recent high school graduates who attend postsecondary schools represents an important shift in attendance patterns since 1972. This shift is in part a result of a reduction in males' initial attendance rates. But equally significant is the increase in attendance by females, and especially the increase over the decade in enrollment for the second year following high school graduation.

These patterns can be summarized by saying that females have become the majority of recent high school graduates attending postsecondary schools both because their initial enrollment rate has not changed over the last decade while males' has fallen and because their continuing enrollment rate has increased while the rate for males has held steady over the decade.

These changes in attendance patterns reflect changes in educational expectations. White males are more likely now than they were in 1972 to expect to attain only high school graduation. White females are much less likely now than in 1972 to expect only that level. The percentage of white females expecting education beyond high school has increased by more than the percentage of males expecting that level. The patterns for blacks are qualitatively similar but less pronounced. These changes in expectations leave males between 3 and 5 percentage points more likely in 1980 than were females to expect only high school graduation, a differential that corresponds closely to the differences in postsecondary rates of attendance for at least 6 months that were mentioned earlier.

More frequent attendance by females occurs primarily because females attend all three types of postsecondary schools more frequently now than do males. Moreover, females are attending both 2-year and 4-year schools more frequently now than they did in 1972, although they are attending vocational schools less frequently. Nevertheless, even with that reduction in attendance, females are enrolled more frequently than males in vocational schools now, as they have been traditionally (table 4-2). This difference in attendance by type of institution also reflects differences in expectations, as a lower percentage of males now than in 1972 expect at least the bachelor's degree, whereas the percentage with that expectation among females has remained constant over the decade.

Females are expecting to obtain education beyond high school more now than are males, and, consistent with those expectations, they are attending more frequently now than are males. Thus, in terms of overall attendance, educational expectations, recent trends in attendance, and types of institutions attended, female's patterns show that they are not subject to substantial disadvantages when compared to males in access. Access by race/ethnicity similarly exhibits a significant degree of equity, but the evidence also shows that some problem areas remain.

Differences by Race/Ethnicity

Overall, there is evidence that race/ethnicity does not affect postsecondary attendance when academic performance is controlled. Nevertheless, in educational expectations, applications to schools, attendance, the match of actions with plans for education, and in the ways in which educational expenses are financed there remain differences among racial/ethnic groups.

Whites of either gender are 6 to 8 percentage points more likely to attend for at least 6 months than are blacks of the same gender. Blacks of

either gender, in turn, are more likely to attend than are Hispanics. The racial/ethnic patterns are reversed for attendance for less than 6 months. But the higher likelihood of being enrolled for the shorter time period is not enough to offset the differences in attendance for the longer time span. Overall, whites are most likely and Hispanics least likely to attend some form of postsecondary education (table 6-1) and the differences are substantial.

However, among males in the top half of the aptitude tests, there are no significant differences by race/ethnicity in rates of attendance for at least 6 months. If any pattern emerges, it shows that blacks are slightly more likely to attend than whites with similar test scores. Whites and Hispanics in the lower half on the test also show no substantial differences from each other in attendance rates. However, blacks in the lower half on the test are more likely to attend for at least 6 months than are whites or Hispanics with similar scores (table 3-5). This control for academic aptitude suggests that the racial/ethnic differences in postsecondary attendance are closely related to those factors that also influence academic aptitude test scores.

For females, as for males, racial/ethnic differences in attendance rates, which show that blacks or Hispanics are less likely overall to attend, disappear when aptitude is controlled. Within each test quartile, black females are more likely to attend for at least 6 months than are either white or Hispanic females, although in the highest test quartile the difference between white and black females is not large enough to be sure that there is a systematic difference. At least black females do not appear to be less likely to attend than white females with similar test scores. Although there are differences from quartile to quartile between white and Hispanic females, within the lower half of test scores and within the upper half, attendance rates of white and Hispanic females are nearly equal (table 3-5).

Those seeking to explain why racial/ethnic groups pursue postsecondary education at different rates must look to those factors that influence aptitude test scores, including SES and family income. Given the aptitude score, being black or Hispanic does not make a new high school graduate less likely to attend a postsecondary school. That finding by itself suggests that there is a substantial degree of equity in access by aptitude level across racial/ethnic groups.

However, expressions of plans or expectations contrast with patterns of attendance in ways that suggest that serious problems may remain for racial/ethnic equity in access. There are at least two general approaches, or criteria, for judging whether there is equity among various population subgroups with regards to their access to postsecondary education. The two criteria lead to different conclusions. First, equity in access may be said to exist across racial/ethnic subgroups if they are equally successful in fulfilling their educational plans and expectations. By this criterion, much remains to be done before equity is achieved.

A second criterion starts with the premise that, unlike secondary education which is required of all, postsecondary education is appropriate only for those who are able to absorb it. From this point of view, equity exists if, after controlling for scholastic aptitude, postsecondary participation rates do not differ appreciably across racial/ethnic groups. By this criterion, equity does indeed prevail. Readers will have to decide for themselves which criterion they find most reasonable.

Either of two measures of intentions suggest problems in meeting their expectations or aspirations, especially for blacks. In terms of the first measure, the contrast between expectations and attendance does not occur when one considers simply expectation for some education beyond high school. One has to look instead at expectations for attendance at 4-year institutions to see substantial differences in the relative levels of expectations and attendance by racial/ethnic groups. Blacks are much more likely than Hispanics of the same gender and slightly more likely than whites of the same gender to expect to pursue some kind of postsecondary education (table 2-2). These relative rates of expectation of some postsecondary education agree with the relative frequencies of overall postsecondary attendance among racial/ethnic groups that were noted earlier. However, the agreement dissolves when 4-year institutions are considered separately. Although the difference is not statistically significant, black males are slightly more likely than white males to expect to attain at least a 4-year college degree, but they attend 4-year colleges significantly less often than white males. Black females are substantially more likely than other females to expect to attain graduate degrees, but they attend 4-year institutions less frequently than do white females. In contrast, both Hispanic males and females are much less likely than either whites or blacks to aspire to at least 4 years of college, and they are much less likely to attend 4-year institutions. That is, relative expectations and attendance are in agreement when whites and Hispanics are compared, and when Hispanics and blacks are compared, but not when blacks and whites are compared.

The second measure of intentions, application rates, shows patterns by race/ethnicity that are even more revealing of the gap between plans and actions. Hispanics are substantially less likely than either blacks or whites to apply to postsecondary schools. Blacks and whites are alike in their rates of application. But blacks are almost twice as likely as whites to apply without attending during the first 2 years following high school graduation (tables 3-1, 3-2, 3-3, 3-10, and 3-11).

The degree to which people act in accordance with their expectations further illustrates the divergence between expectations and actions, particularly among blacks. About one-sixth of whites who planned to take academic courses at colleges or universities did not take such courses. But for both blacks and Hispanics the fraction not fulfilling their plans was about twice as large, nearly one-third. The data do not support the suggestion that those blacks and Hispanics planning to study in colleges or universities but not doing so could have spilled over into junior colleges instead.

Concerns about equitable access among racial/ethnic groups apply not only to access to postsecondary institutions generally but also to equity in the types of postsecondary institutions attended. The various types of institutions are utilized in different combinations by the different racial/ethnic groups. Hispanics are the most likely group to use junior colleges, blacks are least likely. In contrast, Hispanics are about half as likely as whites or blacks to attend universities.

White students are almost twice as likely as others to attend private universities. Nevertheless, even whites are almost twice as likely to attend public universities as private ones. Hispanics, especially females, are the least likely to attend private universities. To the extent that the best in postsecondary education is provided by private institutions,

blacks and Hispanics are less likely than whites to have access to the best postsecondary education, even as they are less likely to attend any postsecondary school.

The HS&B data also show that the racial/ethnic groups rely to different degrees on various sources of financing. To the extent that financing is an important determinant of access and to the extent that governmental programs (especially Federal) act as designed to aid those most in financial need, equity in access is promoted. We consider in turn each of the four broad financing categories: grants, loans, assistance from friends or relatives (including parents), and own funds (from before or during attendance).

Grants (including gifts, scholarships or other forms of assistance from outside the student's family or circle of friends and that need not be repaid) are used most often by blacks and least often by whites. Whereas about three out of five blacks use grants in some amount, fewer than half Hispanics and only about two out of five whites use it. These are still large fractions, as nearly half of all students use grants. But the relative patterns by race/ethnicity are clear, and look similar for both genders.

Dependence on grants was measured in another way. The total amount a respondent reported having to finance was determined from answers to various questions, and the fraction of the total accounted for by grants was calculated. These results supported the impressions given by frequency of grant use, but the evidence is much more dramatic. The most important tendencies within these data can be seen by focusing on just the extremes of frequency distribution.

Over 70 percent of blacks used grants for at least one tenth of their expenses, and 30 percent of black males and 20 percent of black females used grants for virtually all of their financing. Hispanic students rely more heavily on grants than whites, with 13 percent of males and 17 percent of females using grants for all of their expenses, while only 7 percent of whites rely entirely on grants.

Virtually all of the specific types of financing within the four broad categories that are used by more than about 5 percent of students show differences in use by race/ethnicity and family income, and some show differences by academic ability that have implications for equity.

Students from low income families are more likely than other students to use Pell grants, SEOG grants, State scholarships, Social Security education benefits, NDSL loans, and college or university loans. These sources of financing that are directly controlled by Federal policy seem, at least on a very cursory examination, to be serving the function they were designed for, that of aiding financially needy students. Because higher proportions of black and Hispanic students than of white students are likely to qualify as financially needy, it should be no surprise that most of these sources just named are used by larger percentages of black and Hispanic students than of whites. Except for Social Security education benefits, the Federally-controlled sources of financing in this list and those controlled directly by the institution (college/university loans) show that expected pattern of use by race/ethnicity. But the sources that are controlled by State government (State scholarships) are more likely to be used by whites than by other racial/ethnic groups. Whether this allocation at the State level is made in awareness that the large share of some other aid sources go to racial/ethnic minorities is difficult to pinpoint. But these State scholarships are often awarded apparently without

regard to other sources of aid and are therefore unlikely to represent efforts to compensate for the large share of Federally-funded aid going to racial/ethnic minorities.

Three sources of aid, one Federally-funded (GSL loans), one from private sources (grants from private organizations), and one from a combination of State and private sources (school-funded grants) are somewhat more likely to be used by white students, students with higher academic aptitude, and students from higher-income families. But these financing sources were not established to aid primarily the financially needy. In fact, the changes in GSL that followed MISAA (many of which have subsequently been eliminated) were designed to ease access to the program for students from middle income families.

Blacks, Hispanics, and students from low income families are heavily dependent on Federal sources of aid, Pell grants, SEOG, and NDSL. Students from higher income families and white students use both Federal and non-Federal sources: school aid, aid from private organizations, and Federally Guaranteed Student Loans. State scholarship aid helps mostly white students from middle or lower income families. Social Security benefits were used by all racial groups, although black females used them particularly often.

Possible Disadvantages of Middle-Income Students

The last aspect of equity in access that is considered here relates to concerns that children of middle income parents may disproportionately be deprived of the chance for postsecondary education. Income ceilings on eligibility for some Federal programs of aid and loans were raised in the late 1970s because of increasing complaints from middle income families that they were being squeezed out of the college market by rising costs and falling incomes, that it was becoming easier for either low or high income families to send their children to postsecondary schools than it was for middle income families. That pattern does not stand out clearly from these data, but there are two hints that the concern may still be warranted.

The first hint comes when the income-attendance relationship is controlled for aptitude. Overall, the income-attendance relationship shows steady increases in attendance rates as income increases. But within each test quartile there is a dip in the attendance rate at some middle income range. That the dip occurs at different income ranges for each test quartile tends to mask the relationship when only income and attendance are considered. For example, in the two lower test quartiles, the dip comes in the $16,000-$20,000 range. In the two higher test quartiles, however, the dip occurs in the $12,000-$16,000 range (table 3-9).

The second hint shows up in the frequency of use of loans. Overall, loans are used with about equal frequency by the highest and lowest levels of family income. But the most frequent use of loans is by students from families with incomes between $16,000 and $25,000 (table 5-1).

Postsecondary Academic Excellence

A second area of policy concern that these data permit one to consider involves the general issue raised by the National Commission on Excellence in Education, the quality of preparation for higher education and the

quality of the postsecondary education that students are receiving today. These data permit one to ask whether the brightest students are today attending postsecondary schools with the same frequency as a decade ago or whether academic standards have been lowered so much that lower aptitude students constitute a larger fraction of the student body now than they did a decade ago. As often is the case when such issues are being examined, evidence is available to support both the relatively optimistic and the relatively pessimistic views of trends in academic quality.

Changes in educational expectations, for example, provide evidence for both optimists and pessimists. On the one hand, among those expecting to get at least the bachelor's degree, a much larger fraction now than in 1972 expects to pursue education beyond the bachelor's degree. This pattern emerges for white and black males and females. It is less apparent for Hispanics. On the other hand, it is also true that now compared to 1972 a larger percentage of males of all racial/ethnic backgrounds express the expectation of getting only a high school education. In this sense, the level of expectations for education has shifted in a manner that defies neat characterization as a shift toward either more or less education. It is, instead, a shift away from modest amounts of postsecondary education toward even less education by some and toward more education by others.

One relatively optimistic trend concerns the enrollment rates of the highest aptitude students. Enrollment by the highest aptitude test quartile has not dropped over the last decade. The changes in overall enrollment rates appear to show that lower aptitude students and high SES students are enrolling less often now than a decade ago. But the loss of high SES students has not reduced the fraction of high aptitude students attending. Moreover, the continuation rates into the second year after high school graduation are higher now than a decade ago for the highest aptitude students. This suggests that highest aptitude students are attending initially as often now as in the recent past, but that having begun, they are more likely now to continue beyond the first year.

Shifts in Enrollment

The third and last major policy area reviewed here concerns the effect of shifts in enrollment on the character of postsecondary education. As many observers have noted, several trends in enrollment are emerging, with the potential to produce severe changes in the numbers and types of postsecondary educational institutions. The analyses undertaken here shed some light on aspects of of those enrollment trends.

The first aspect concerns the overall scale of enrollment. The demographic facts are that the population of traditional college age will decline from 29.5 million in 1981 to 23.2 million in 1995 and that much of the decline occurs among white students. Minority students will increase their share of the group from 14.2 percent to 19.3 percent by 1995 (Breneman and Nelson 1980).

The HS&B and NLS '72 data suggest that even as the population of traditional college-age students declines, overall initial rates of attendance among that age group are falling, at least for the first 2 years after high school graduation. Increased rates of attendance among females are not large enough to offset reduced attendance rates among males. The reductions are particularly large for Hispanics, the faster-growing of the

major racial/ethnic minority groups. Moreover, the reductions in enrollment rates for Hispanics are accompanied by reductions in the average level of educational expectations among Hispanics.

A second aspect concerns enrollment patterns of select groups of young people. Enrollment rates among the highest aptitude students have remained high over the decade. In contrast, enrollment is declining among high SES students and among low aptitude students.

The third aspect of the implications of the enrollment trends in HS&B concerns the conflict among vocational, 2-year and 4-year institutions. The most direct evidence is that concerning continuation rates by type of institution. The HS&B data show that continuation rates within 4-year institutions and vocational institutions are slightly higher now than they were a decade ago, whereas the continuation rates for 2-year institutions are slightly lower.

That females are in the majority among postsecondary students carries some implications for the distribution of enrollments among types of schools. Female enrollment rates are higher now than in 1972 in both 2-year and 4-year schools. Their enrollment rates in vocational schools are lower than in 1972. Although male initial enrollments have fallen over the decade, their enrollment rate in the second year after high school graduation has remained about the same. A larger proportion of males than of females who attend a postsecondary institution attend 4-year institutions.

Enrollment rates of high aptitude students have held level in the first year and have risen in the second year after high school graduation while rates for low aptitude students have fallen.

As has already been noted, expectations have shifted toward education beyond the bachelor's degree.

The concentration of the reduction in the population of traditional college age is among whites. The HS&B data verify that white students tend to be relatively more likely to attend 4-year institutions.

There is also considerable frustration of plans among blacks and Hispanics who, as high school seniors, planned to attend 4-year institutions.

Finally, a dramatic reduction occurred in average educational expectations among Hispanic youth. But several considerations moderate the likely impact through this route on 2-year enrollments. Although Hispanic youth are much more likely than a decade ago to expect only a high school graduation, they remain more likely than others to expect to earn a 2-year degree (shown in the tables as expectations of at least 2 years but less than 4 years of college). They also represent the fastest-growing major racial/ethnic group.

In summary, the results of the analyses conducted in this study provide evidence that Federal policy has had effects in the desired direction in terms of equity. The evidence indicates continued areas of need, particularly in the fulfillment of expectations for racial/ethnic minorities. It also underscores the potential for serious problems in the higher education system as different types of institutions find themselves competing for a diminishing number of high ability students of the traditional age for college attendance. Policymakers now have available additional useful information about the nature and course of the Nation's higher education establishment.

FOOTNOTES

1 This section is taken in large part from Jones et al. (1983), pp. 1-4.

2 See for example: Twentieth Century Fund 1983; The College Board 1983; Education Commission of the States 1983; National Com mission on Excellence in Education 1983; Boyer 1983; and Adler 1982.

3 This discussion of status attainment has benefited from access to L. Hotchkiss and S. Borow, "Sociological Perspective on Career Counseling," mimeo, and from discussions with Dr. Hotchkiss.

4 Note that in almost all citations that follow in this discussion of empirical work, the effects reported are determined after controlling for other variables. But the set of controls included and the exact specification of any control varies among the studies.

5 For vocational students 33.3 (= 14.2 + 19.1) and 33.4 expected to attend trade schools in 1980 and 1972, respectively. The percentage for college below the bachelor's degree are 17.3 and 13.6. For academic students, 6.6 and 8.4 expected trade school; 12.2 and 9.8 expected college below the bachelor's degree. For general students, 23.6 and 23.5 expected trade school, 17.3 and 16.2 expected less than 4 years of college.

6 For the West (including Mountain and Pacific in HS&B), in 1980 both Mountain and Pacific States have totals below the 1972 average. The figures are 18.9 = 14.5 + 4.4 and 21.3 = 4.5 + 16.8 in 1980 compared to 1972. For the Northeast (NE and MA in HS&B) the numbers are 14.7 = 1.4 + 13.3 and 13.7 = 1.6 + 12.1 compared to 10.9 for 1972. For the South (SA, ESC, and WSC in HS&B), the figures are 13.8 (= 2.1 + 11.7), 17.0 (4.2 + 12.8) and 13.8 (2.2 + 11.6) in 1980 compared to 10.5 in 1972. For the North Central (ENC and WNC in HS&B), the figures are 15.3 (= 3.7 + 11.6) and 11.5 (= 2.9 + 8.6) in 1980 compared to 10.4 for 1972.

7 Missing data is only a small part of the 61.4 percent (100 -38.6) of blacks who did not change their expectations from high school graduation only; thus most blacks who initially expected only high school graduation raised their sights over the next 21 months. The comparable figures for Hispanics and whites who raised their expectations is less than 45 percent (100-55.1) and less than 40 percent (100-60.1), respectively.

8 It is possible, but unlikely, that the turnover is so different between 1972-73 and 1980-81, that a larger fraction of first year enrollees continued into the second year in 1972-73 than in 1980-81. That issue is considered in conjunction with table 4-3 in chapter 4. The data presented there suggest that turnover is not so different that anyone could argue for greater stability in 1972-73 than in 1980-81. If anything, the data in table 4-3 are even more suggestive of greater stability in 1980-81. Turnover is not so variable as to permit an interpretation of greater stability in 1972-73. See Campbell, Gardner, and Winterstein 1984 for an analysis of turnover for NLS '72 data.

9 As on page 119, it is conceivable that high turnover could invalidate this conclusion. But the high fraction of high aptitude students with at least 6 months attendance, compared to those with less than 6 months, suggests that turnover rates are not so volatile as to invalidate this conclusion. Note for example, that 7.1 percent out of 34.2 = 7.1 + 27.1 in lowest test quartile attend less than 6 months. For high test quartile students, only 3.3 percent out of 82.9 percent (3.3 + 79.6) attended less than 6 months (table 3-2). Also, Campbell, Gardner, and Winterstein (1984) find relatively high rates of continuation that argue against expecting excessively high turnover.

10 The available comparison data from the Class of '72 (from Fetters, Dunteman, and Peng 1977) include figures only for racial/ethnic categories combined, not for race/gender subgroups separately.

11 There may be some bias in completeness of reporting by test quartile, since the lowest test quartile reports the least fre quent use of any source of financing and the highest quartile reports most frequent use of each source of financing.

12 Calculated as (100 - 54.4) $\times$ .586. The first term, (100 - 54.5), gives the percentage of those who take some postsecondary education either year who use some form of aid. The second term shows the fraction of the group using aid who used Pell grants (in 1980-81).

13 There may be differences in overall test scores and differences in verbal and mathematical performance by gender, but not in the underlying aptitudes that those tests attempt to measure. The differences arise because the tests measure a combination of achievement and aptitude.

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APPENDIX

Table A2-1--Standard errors for the percent of high school seniors in 1980 expecting to attain specified levels of education

	HS&B
High school graduate	.64
Trade school	
LT 2 years	.41
Two or more years	.45
College	
LT 2 years	.23
Two or more years	.54
Bachelor's degree	.51
Master's degree	.45
Doctorate degree	.47
Total	10577

Table A2-2--Standard errors for the percent of HS&B seniors expecting to attain specified levels of education, by selected background characteristics

Characteristics	(n)	Educational Expectation: High School Graduate	Trade School: LT 2 years	Trade School: 2 or more years	College: LT 2 years	College: 2 or more years	College: bachelor's degree	College: graduate degree
(n)		180	773	1228	307	1338	2734	2387
Males								
Hispanic	1328	2.5	1.1	1.5	.7	1.3	1.7	1.7
Black	1243	1.2	.7	1.3	.6	1.4	1.3	1.9
White	2334	1.1	.6	.9	.3	.9	1.1	1.1
Females								
Hispanic	1487	2.3	1.1	1.5	1.0	1.4	1.6	1.3
Black	1545	1.2	.7	1.0	.4	1.1	1.4	1.7
White	2640	1.0	.7	.8	.4	1.0	1.0	.9
Test Quartile								
Low	3244	1.8	.9	1.2	.5	1.0	.8	.7
2nd	2326	1.2	1.2	1.0	.6	1.1	1.3	.8
3rd	2161	1.2	.8	.9	.5	.9	1.3	1.2
High	2276	.5	.4	.6	.4	.8	1.3	1.7
SES Quartile								
Low	4118	1.2	.9	.8	.4	.9	1.0	.6
2nd	2474	1.1	.8	.9	.6	.8	1.1	1.0
3rd	2252	.8	.8	1.1	.4	1.2	1.1	1.0
High	2040	.9	.4	.7	.4	.9	1.3	1.6
Curriculum								
General	4009	1.1	.8	.8	.5	1.0	.9	.8
Vocational	2737	1.5	1.1	1.4	.6	.9	.7	.6
Academic	4249	.5	.3	.5	.3	.8	1.3	1.3
Advanced Courses								
Yes	847	.7	.9	1.0	.5	1.4	2.6	3.9
No	10285	.7	.4	.5	.2	.6	.5	.6

Table A2-2 Continued

Characteristics	(n)	Educational Expectation: High School Graduate	Trade School: LT 2 years	Trade School: 2 or more years	College: LT 2 years	College: 2 or more years	bachelor's degree	graduate degree
Region								3.8
NE	484	1.8	1.4	1.8	.7	3.4	4.0	2.0
MA	1642	1.7	.9	1.2	.4	1.5	1.5	1.5
SA	2062	1.4	.8	1.0	.5	1.1	1.7	2.6
ESC	617	4.5	2.8	1.2	2.2	1.6	2.9	1.9
WSC	1520	1.8	.8	1.5	.6	1.6	1.3	1.4
ENC	1910	1.7	.9	1.0	.5	.8	.9	2.3
WNC	720	2.4	1.1	2.3	1.0	1.2	1.8	3.7
MTN	625	2.5	1.2	1.1	1.4	.6	2.8	2.3
PAC	1590	1.8	.8	1.6	1.2	1.8	1.5	
Family Income								1.6
0-6,999	1128	2.9	1.5	1.6	.7	2.1	1.8	1.4
7,000-11,999	1566	1.9	1.1	1.2	.6	1.3	1.4	1.7
12,000-15,999	1607	1.7	1.2	1.2	.8	1.3	1.5	1.3
16,000-19,999	1662	1.6	1.1	1.3	.7	1.3	1.5	1.7
20,000-24,999	1514	1.1	.7	1.2	.6	1.0	1.8	1.5
25,000-37,999	1575	1.2	.7	1.2	.5	1.3	1.7	1.9
38,000 and up	1310	1.2	.6	.9	.6	1.1	1.7	

Table A2-4--Standard errors for the percent of HS&B seniors expecting to obtain a bachelor's degree or higher, by type of school and attendance preferred, and by gender and race/ethnicity

Type of School Preferred	(n)	Males			Females		
		Hispanic	Black	White	Hispanic	Black	White
(n)		492	505	1182	572	714	1265
Public - 4-Year							
In-state, full-time	2133	4.3	2.9	1.9	3.5	2.9	2.3
In-state, part-time	241	1.9	2.2	.6	1.0	1.3	.8
Out-of-state, full-time	482	.7	2.1	1.1	1.8	1.2	.9
Out-of-state, part-time	54	.5	.8	.3	.3	.9	.4
Private - 4-Year							
In-state, full-time	696	3.1	1.7	1.3	2.8	1.0	1.4
In-state, part-time	41	.1	.4	.3	.8	1.0	.2
Out-of-state, full-time	560	3.5	2.0	1.9	.9	1.5	1.5
Out-of-state, part-time	16	.5	.1	.1	.3	.4	--
Public - 2-Year							
In-state, full-time	299	1.6	1.3	.8	1.7	1.0	.7
In-state, part-time	126	.9	.8	.8	2.2	1.0	.5
Out-of-state, full-time	23	.4	.4	.3	.4	.4	.1
Out-of-state, part-time	15	.1	.6	0.0	.2	.2	.2
Private - 2-Year							
In-state, full-time	19	.4	.1	.2	.2	.2	.2
In-state, part-time	11	.4	.1	.2	.4	.2	.2
Out-of-state, full-time	12	.4	.1	.2	.6	--	.3
Out-of-state, part-time	2	.3	--	.1	--	--	--
Total	4730						

Table A2-5--Standard errors for the percent of HS&B seniors expecting to obtain less than a bachelor's degree, by type of school and attendance preferred, and by gender and race/ethnicity

Type of School Preferred	(n)	Males			Females		
		Hispanic	Black	White	Hispanic	Black	White
(n)		404	307	616	531	465	923
Public - 4-Year							
In-state, full-time	332	1.1	1.9	1.5	2.5	1.4	1.1
In-state, part-time	169	1.7	1.3	1.0	1.2	1.2	.6
Out-of-state, full-time	105	1.3	1.5	.9	.3	1.5	.6
Out-of-state, part-time	42	.6	1.1	.5	1.9	.7	.3
Private - 4-Year							
In-state, full-time	57	.5	.9	.8	1.9	.7	.5
In-state, part-time	27	.1	.5	.4	1.4	.4	.4
Out-of-state, full-time	36	.8	1.2	.4	.4	.5	.3
Out-of-state, part-time	16	.3	.3	.6	0.0	.5	.2
Public - 2-Year							
In-state, full-time	859	3.1	2.6	2.4	3.1	1.8	1.5
In-state, part-time	1053	3.9	2.8	2.2	3.4	2.7	1.8
Out-of-state, full-time	102	1.9	1.6	.7	.5	1.1	.8
Out-of-state, part-time	177	1.2	1.8	1.4	.6	1.4	.8
Private - 2-Year							
In-state, full-time	119	2.2	1.2	.7	2.0	.6	1.1
In-state, part-time	77	1.3	.8	.8	.7	.6	.5
Out-of-state, full-time	46	.5	.8	.3	.1	.6	.5
Out-of-state, part-time	29	.1	--	.6	.5	.8	.1
Total	3246						

Table A2-6--Standard errors for the percent of HS&B seniors with specified plans for college attendance, by selected background characteristics

Characteristics	(n)	Plans for College			Don't Know	No
		Next Year	After 1 Year	After Several Years		
Males						
Hispanic	1177	2.6	1.2	.9	2.2	1.4
Black	1039	2.0	1.0	.7	1.1	1.7
White	2193	1.4	.5	.5	.6	1.3
Females						
Hispanic	1362	2.7	1.6	.6	1.7	2.2
Black	1344	1.6	.9	.6	1.0	.9
White	2514	1.5	.7	.4	.9	1.1
Test Quartile						
Low	2758	1.6	.8	.5	1.5	1.9
2nd	2147	1.4	.8	.6	1.0	1.4
3rd	2034	1.7	1.0	.6	1.1	1.5
High	2181	1.2	.5	.5	.8	.6
SES Quartile						
Low	3709	1.2	.8	.4	1.1	1.3
2nd	2277	1.6	.8	.7	1.1	1.5
3rd	2088	1.3	.7	.6	.9	1.1
High	1919	1.3	.8	.5	.6	.9
Region						
NE	450	3.9	2.1	.8	1.3	1.8
MA	1530	2.5	.8	.8	.9	1.9
SA	1830	1.9	.9	.6	.9	1.5
ESC	528	4.4	1.2	.9	2.1	2.2
WSC	1401	3.4	1.5	1.1	1.8	2.1
ENC	1677	2.1	1.0	.5	1.2	1.5
WNC	673	2.0	1.8	.5	1.8	2.5
MTN	574	2.4	2.0	1.7	2.7	2.3
PAC	1511	2.3	1.1	.8	1.3	1.6
Family Income						
0-6,999	983	3.5	1.2	.9	1.5	3.0
7,000-11,999	1425	2.4	1.3	1.0	1.4	2.1
12,000-15,999	1466	1.9	1.4	.7	1.4	1.5
16,000-19,999	1560	1.7	.8	.5	1.5	1.2
20,000-24,999	1386	1.7	.8	.5	1.0	1.5
25,000-37,999	1453	1.7	1.1	.5	1.1	1.1
38,000 and up	1243	1.9	.8	.7	.7	1.6

Table A2-7--Standard errors for the percent of white male HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	(n)	Parents' Aspirations for Students: Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
(n)		1473	182	242	100	41	61	233
High school graduate	376	2.3	2.5	1.8	1.6	.9	1.4	2.1
Trade school								
LT 2 years	140	3.6	4.0	4.5	1.1	1.4	3.0	2.0
Two or more years	277	2.9	1.4	3.8	1.5	1.1	1.4	2.0
College								
LT 2 years	32	9.6	7.1	5.8	4.2	4.1	4.5	9.1
Two or more years	232	3.1	1.3	1.3	1.4	1.1	1.1	2.3
Bachelor's degree	679	1.7	.4	.3	.4	.6	.4	1.5
Master's degree	283	2.2	.2	.1	.8	—	.5	1.8
Doctorate degree	264	2.8	.7	.7	1.0	—	1.0	2.3
Total	2283							

Table A2-8--Standard errors for the percent of white female HS&B seniors whose parents had specified educational expectations, by level of student's educational expectations

Student's Educational Expectations	(n)	Parents' Aspirations for Students: Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
(n)		1851	221	138	27	47	60	262
High school graduate	352	2.4	2.6	1.4	.8	1.1	1.7	2.2
Trade school								
LT 2 years	223	3.2	3.3	3.0	1.4	.3	2.4	3.1
Two or more years	219	4.4	2.3	2.5	1.7	1.4	.7	2.8
College								
LT 2 years	99	5.1	3.0	.3	1.5	—	2.1	3.5
Two or more years	410	2.1	1.1	.7	.5	.5	.7	1.5
Bachelor's degree	761	1.1	.2	.3	.3	.5	.4	1.1
Master's degree	328	2.1	.1	.7	.5	.6	.5	1.9
Doctorate degree	214	1.9	--	.1	--	--	--	1.9
Total	2606							

Table A2-9--Standard errors for the percent of Hispanic male HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	(n)	Parents' Aspirations for Students: Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
(n)		759	159	129	42	6	48	116
High school graduate	307	3.1	4.2	2.3	1.0	1.9	2.5	3.8
Trade school								
LT 2 years	89	8.7	9.7	7.0	1.8	--	2.5	4.7
Two or more years	168	7.0	4.9	6.6	1.5	1.3	.6	1.7
College								
LT 2 years	41	10.4	6.2	5.6	4.1	--	5.1	3.7
Two or more years	139	6.6	4.4	2.0	4.8	.9	2.3	1.9
Bachelor's degree	263	3.1	2.2	.7	.7	.6	.8	1.8
Master's degree	133	1.4	--	--	.6	--	--	1.5
Doctorate degree	119	3.0	1.3	1.6	1.5	--	1.4	.4
Total	1259							

Table A2-10--Standard errors for the percent of black male HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	(n)	Parents' Aspirations for Students: Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
(n)		740	100	102	80	7	26	101
High school graduate	198	3.6	3.5	3.4	2.9	1.3	2.3	2.8
Trade school								3.2
LT 2 years	58	7.1	8.0	6.4	5.1	1.6	1.5	
Two or more years	163	4.3	2.4	4.1	2.2	--	1.7	
College								2.8
LT 2 years	27	14.7	6.3	8.5	3.6	3.7	4.9	9.7
Two or more years	117	4.0	2.4	1.5	2.0	--	1.7	
Bachelor's degree	312	3.0	2.1	.5	2.3	.4	.4	2.2 1.4
Master's degree	151	5.3	1.7	4.6	1.4	.8	--	1.8
Doctorate degree	130	4.2	--	2.7	2.0	--	1.5	3.3
Total	1156							

Table A2-11--Standard errors for the percent of Hispanic female HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	(n)	Parents' Aspirations for Students: Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
(n)		1018	158	72	16	11	37	138
High school graduate	278	4.0	4.8	2.9	1.1	2.1	2.0	4.2
Trade school								
LT 2 years	120	5.6	6.0	6.6	1.4	--	2.8	6.5
Two or more years	159	7.2	4.0	6.1	.3	.7	3.8	3.7
College								
LT 2 years	67	10.8	10.8	.2	2.1	1.5	1.9	4.6
Two or more years	255	3.0	1.6	.3	1.0	--	1.8	2.2
Bachelor's degree	308	2.9	2.9	.9	.4	.5	.6	1.4
Master's degree	171	2.4	1.6	.4	--	--	--	2.3
Doctorate degree	122	4.3	1.0	1.0	--	--	.3	3.9
Total	1480							

Table A2-12--Standard errors for the percent of black female HS&B seniors whose parents had specified educational expectations for them, by level of student's educational expectations

Student's Educational Expectations	(n)	Parents' Aspirations for Students: Go To College	Get A Full-Time Job	Go To A Trade School	Enter the Military	Don't Care	Student Doesn't Know	Does Not Apply
(n)		1479	115	102	28	10	32	118
High school graduate	194	3.8	4.5	2.0	1.7	.9	1.3	2.7
Trade school	107							
LT 2 years	191	5.4	3.9	4.9	.8	--	1.8	2.8
Two or more years		4.0	2.0	3.5	1.3	.9	1.1	2.6
College								
LT 2 years	32	9.8	6.4	--	--	--	4.7	6.0
Two or more years	170	2.4	2.2	1.2	1.0	--	.5	2.5
Bachelor's degree	352	1.8	.5	.6	.4	.4	.9	1.1
Master's degree	211	2.1	.7	.7	--	--	.7	1.5
Doctorate degree	222	2.7	.8	1.1	1.3	.4	.9	1.6
Total	1389							

Table A3-1--Standard errors for the percent of HS&B seniors with specified postsecondary attendance and appplication rates, by gender and race/ethnicity

		Attendance and Application Rates						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(n)	Attended LT 6 Months	Attended 6 Months Or More	Any Attendance (1) + (2)	Applied, Did Not Attend	Applied (3) + (4)	Attendance Rate For Applicants [(3)/(5)] x 100	Not Attending (4) + (8)
Males								
Hispanic	1387	1.0	2.5	2.6	1.3	2.7	2.5	2.6
Black	1332	.9	2.3	2.4	1.2	2.5	2.0	2.4
White	2583	.5	1.2	1.3	.5	1.2	.8	1.4
Females								
Hispanic	1531	1.8	2.5	2.4	.9	2.5	1.6	2.3
Black	1608	1.2	2.2	2.3	1.1	2.3	1.6	1.9
White	2834	.5	1.5	1.3	.6	1.2	.9	1.1

Table A3-2--Standard errors for the percent of HS&B seniors with specified postsecondary attendance and appplication rates, by test quartile and SES quartile

		Attendance and Application Rates						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(n)	Attended LT 6 Months	Attended 6 Months Or More	Any Attendance (1) + (2)	Applied, Did Not Attend	Applied (3) + (4)	Attendance Rate For Applicants [(3)/(5)] x 100	Not Attending (4) + (8)
Test Quartile								
Low	3405	.7	1.2	1.3	.8	1.4	1.6	1.5
2nd	2365	.7	1.5	1.6	.8	1.6	1.3	1.4
3rd	2184	.8	1.4	1.5	.6	1.6	.8	1.5
High	2305	.4	1.2	1.1	.7	1.2	.8	1.0
SES Quartile								
Low	4218	.6	1.0	1.0	.7	1.2	1.3	1.2
2nd	2523	.8	1.7	1.5	.6	1.5	1.0	1.5
3rd	2301	.6	1.3	1.3	.6	1.1	.9	1.2
High	2088	.8	1.6	1.2	.8	1.0	.9	1.3

Table A3-3--Standard errors for the percent of HS&B seniors with specified postsecondary attendance and application rates, by family income

		Attendance and Application Rates						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(n)	Attended LT 6 Months	Attended 6 Months Or More	Any Attendance (1) + (2)	Applied, Did Not Attend	Applied (3) + (4)	Attendance Rate For Applicants [(3)/(5)] x 100	Not Attending (4) + (8)
Family Income								
0-6,999	1163	.9	2.3	2.1	1.1	2.4	1.8	2.2
7,000-11,999	1602	1.1	2.2	2.2	1.2	2.0	2.0	2.1
12,000-15,999	1640	.8	2.0	1.9	.8	2.1	1.2	2.0
16,000-19,999	1700	.9	1.5	1.4	.9	1.5	1.3	1.3
20,000-24,999	1535	1.1	1.9	1.8	.6	1.8	.9	1.7
25,000-37,999	1608	.7	1.8	1.8	.7	1.6	1.0	1.7
38,000 and up	1351	.9	2.3	2.0	.9	1.9	1.2	1.8

Table A3-4--Standard errors for the percent of HS&B seniors with specified periods of postsecondary attendance, by SES quartile and test quartile

SES Quartile	Test Quartile	(n)	Postsecondary Attendance				
			LT 6 Months	Six or More Months	Did Not Attend And Did Not Apply	Applied, Did Not Attend	Undetermined
Low	Low	1769	.9	1.6	2.0	1.3	1.1
	2nd	846	1.2	2.4	2.4	1.5	1.1
	3rd	574	2.0	2.8	2.7	1.7	2.0
	High	552	1.1	2.2	2.1	1.6	1.2
2nd	Low	703	1.9	2.1	2.5	1.5	1.4
	2nd	595	1.1	3.1	2.6	1.3	1.6
	3rd	560	1.3	3.2	2.5	1.5	1.5
	High	414	1.0	2.6	2.3	1.2	1.3
3rd	Low	489	1.8	3.1	3.5	1.2	1.5
	2nd	513	1.9	3.1	2.9	2.3	1.4
	3rd	556	1.4	2.3	2.1	1.1	1.1
	High	517	.8	2.5	1.4	1.4	1.5
High	Low	217	2.7	5.5	4.4	3.4	3.3
	2nd	369	2.6	4.3	2.9	2.2	2.0
	3rd	472	2.1	2.8	1.6	1.1	1.1
	High	809	.8	1.7	.9	1.0	1.3

Table A3-5--Standard errors for the percent of HS&B seniors with specified postsecondary attendance, by gender, test quartile, and race/ethnicity

Gender	Test Quartile	Race/ Ethnicity	(n)	Postsecondary Attendance: LT 6 Months	Six or More Months	Did Not Apply	Applied, Did Not Attend	Undetermined
Males	Low	Hispanic	552	1.5	2.4	3.9	2.1	1.9
		Black	560	.9	2.4	3.2	1.5	1.5
		White	303	1.5	2.8	3.1	1.7	1.5
	2nd	Hispanic	291	2.3	5.0	5.8	3.0	3.2
		Black	242	1.8	2.7	3.5	2.6	1.5
		White	449	1.3	2.9	2.6	1.6	1.6
	3rd	Hispanic	222	4.2	6.4	6.0	1.4	4.0
		Black	179	2.0	5.7	2.6	4.1	2.4
		White	549	1.1	3.4	2.4	1.0	1.5
	High	Hispanic	135	3.9	5.4	4.0	.2	3.5
		Black	115	3.4	5.0	1.8	.2	4.0
		White	894	.8	1.4	1.2	1.2	1.4
Females	Low	Hispanic	671	1.5	2.7	2.5	1.7	.9
		Black	759	.9	1.4	1.7	1.4	1.2
		White	391	1.6	2.5	3.2	1.7	1.4
	2nd	Hispanic	311	3.3	5.7	5.5	2.4	1.4
		Black	361	1.8	2.9	1.7	2.2	1.9
		White	571	.9	2.1	2.0	1.6	1.1
	3rd	Hispanic	239	2.1	4.9	3.9	1.5	4.4
		Black	173	2.3	4.8	2.3	2.5	2.8
		White	690	1.4	2.4	2.3	.9	.8
	High	Hispanic	110	4.7	7.6	3.0	1.8	4.7
		Black	77	2.3	5.2	2.4	2.8	3.3
		White	862	.7	1.7	1.1	.7	.9

Table A3-6--Standard errors for the percent of HS&B seniors with specified postsecondary attendance, by gender, SES quartile, and race/ethnicity

Gender	Test Quartile	Race/ Ethnicity	(n)	Postsecondary Attendance: LT 6 Months	Six or More Months	Did Not Apply	Applied, Did Not Attend	Undetermined
Males	Low	Hispanic	643	2.0	2.5	2.8	2.5	2.0
		Black	569	1.0	2.7	3.2	1.9	1.1
		White	503	1.2	2.8	2.5	1.5	1.6
	2nd	Hispanic	300	1.7	4.1	5.7	2.6	3.2
		Black	293	1.3	2.8	3.5	2.2	1.3
		White	521	1.1	2.6	2.6	1.1	1.2
	3rd	Hispanic	241	1.3	5.3	6.2	.8	2.9
		Black	221	1.7	3.4	3.0	1.8	1.6
		White	636	1.0	2.4	2.1	1.4	1.0
	High	Hispanic	139	4.5	6.1	5.3	1.6	2.4
		Black	136	5.1	7.2	4.8	5.7	3.5
		White	701	1.0	2.3	1.5	1.1	1.3
Females	Low	Hispanic	838	1.2	2.5	2.7	1.5	1.7
		Black	834	1.1	1.6	1.3	1.2	1.3
		White	648	1.5	2.4	2.8	1.2	1.2
	2nd	Hispanic	293	3.1	4.9	4.6	.8	2.6
		Black	327	1.4	2.8	2.2	2.4	2.5
		White	672	1.2	2.4	2.1	1.1	1.2
	3rd	Hispanic	199	4.3	4.6	4.1	3.2	2.3
		Black	219	1.5	4.6	2.8	2.1	2.2
		White	639	1.0	2.0	1.4	.7	1.3
	High	Hispanic	143	2.4	4.6	3.2	1.7	1.0
		Black	124	4.9	5.9	1.4	1.8	1.8
		White	691	1.4	2.2	1.4	1.1	.8

Table A3-7—Standard errors for the percent of HS&B and NLS '72 students attending a postsecondary school at specified times, by selected background characteristics

Characteristics	(n)	October 1980	(n)	October 1981
Hispanic				
Males	1348	1.8	1357	2.7
Females	1498	2.5	1502	2.1
Black				
Males	1306	2.5	1302	2.4
Females	1584	2.1	1578	1.9
White				
Males	2532	1.5	2538	1.4
Females	2798	1.3	2796	1.2
All				
Males	5553	1.3	5562	1.2
Females	6221	1.0	6218	.9
Test Quartile				
Low	3342	1.4	3338	1.1
2nd	2327	1.5	2322	1.3
3rd	2142	1.5	2145	1.8
High	2274	1.0	2280	1.2
SES Quartile				
Low	4148	.9	4149	.8
2nd	2470	1.6	2468	1.5
3rd	2262	1.3	2262	1.5
High	2049	1.5	2054	1.7
Family Income				
0-6,999	1141	2.1	1136	2.4
7,000-11,999	1572	2.5	1571	2.3
12,000-15,999	1615	2.1	1617	2.1
16,000-19,999	1667	1.4	1671	1.4
20,000-24,999	1502	1.8	1505	1.7
25,000-37,999	1587	2.0	1589	1.8
38,000 and up	1322	2.1	1326	2.0

Table A3-9--Standard errors for the percent of HS&B seniors with specified test scores, by family income and attendance

Family Income		Test Quartile				
Attending 6 months or more	(n)	Low	2nd	3rd	High	Total
0-6,999	427	2.3	5.3	8.7	7.3	2.3
7,000-11,999	676	2.9	4.5	4.6	5.2	2.2
12,000-15,999	761	3.4	3.9	3.5	4.3	2.0
16,000-19,999	820	2.7	3.4	3.8	3.7	1.5
20,000-24,999	844	2.7	4.1	4.3	2.9	1.9
25,000-37,999	985	4.4	3.8	3.1	2.1	1.8
38,000 and up	906	5.6	4.5	3.6	2.0	2.3
Total	5419					

Family Income		Test Quartile				
Applying or Ever Attending	(n)	Low	2nd	3rd	High	Total
0-6,999	614	2.3	6.5	8.7	5.2	2.4
7,000-11,999	945	3.2	5.1	4.7	4.0	2.0
12,000-15,999	998	3.5	3.3	3.0	4.2	2.1
16,000-19,999	1059	3.4	3.7	3.8	3.1	1.5
20,000-24,999	1004	3.4	3.8	3.7	2.6	1.8
25,000-37,999	1166	4.6	4.6	2.4	1.8	1.6
38,000 and up	1027	5.1	4.0	3.6	1.7	1.9
Total	6813					

Table A3-10--Standard errors for the percent of HS&B seniors with specified postsecondary attendance and application rates, by curriculum

		Attendance and Application Rates						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(n)	Attended LT 6 Months	Attended 6 Months Or More	Any Attendance (1) + (2)	Applied, Did Not Attend	Applied (3) + (4)	Attendance Rate For Applicants [(3)/(5)] x 100	Not Attending (4) + (8)
Curriculum								
General	4118	.5	1.3	1.3	.5	1.2	.9	1.2
Vocational	2853	.6	1.3	1.4	.7	1.4	1.4	1.4
Academic	4328	.6	.8	.8	.4	.8	.5	.6

Table A3-11--Standard errors for the percent of HS&B seniors with specified postsecondary attendance and application rates, by region

		Attendance and Application Rates						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(n)	Attended LT 6 Months	Attended 6 Months Or More	Any Attendance (1) + (2)	Applied, Did Not Attend	Applied (3) + (4)	Attendance Rate For Applicants [(3)/(5)] x 100	Not Attending (4) + (8)
Region								
NE	541	1.1	4.9	4.9	1.7	4.2	2.9	4.2
MA	1800	.8	2.9	2.8	.7	2.7	1.2	2.4
SA	2200	.8	1.5	1.6	1.4	1.5	2.1	1.3
ESC	649	.9	2.8	2.8	.8	2.8	1.3	2.5
WSC	1585	.9	2.3	1.7	1.3	1.8	2.0	2.0
ENC	2037	.7	1.8	2.1	.6	2.1	.9	1.9
WNC	763	.7	1.3	1.5	.8	1.1	1.3	1.3
MTN	668	1.4	2.4	3.2	2.0	1.8	3.5	4.4
PAC	1752	.9	2.5	2.1	.5	2.3	.7	2.2

Table A3-12--Standard errors for the percent of HS&B students attending a postsecondary school at specified times, by region

Region	(n)	October 1980	(n)	October 1981
NE	529	3.2	530	4.0
MA	1767	2.6	1770	2.3
SA	2178	1.3	2174	1.3
ESC	635	3.7	632	3.1
WSC	1547	2.5	1554	3.0
ENC	2003	2.1	2007	1.8
WNC	751	1.9	757	1.4
MTN	662	4.0	660	3.7
PAC	1702	2.5	1696	2.9

Table A4-1--Standard errors for the percent of HS&B seniors who attended specified types of postsecondary schools, by selected background characteristics

Characteristics	(n)	Types of Postsecondary Schools: Vocational public	Vocational private	Junior College public	Junior College private	College/University public	College/University private	Multiple public	Multiple private
(n)		498	240	1643	87	2130	891	716	26
Males									
Hispanic	1387	.6	.5	2.3	.3	1.3	1.2	.7	.4
Black	1332	1.4	.3	1.9	.2	1.7	.9	.5	.1
White	2583	.5	.3	.8	.1	1.0	.8	.6	.1
Females									
Hispanic	1531	.8	1.3	2.1	.3	1.4	.7	1.2	.2
Black	1608	1.1	.6	1.3	.2	1.7	.7	1.1	.6
White	2834	.6	.4	1.1	.3	.9	.9	.6	.1
Test Quartile									
Low	3405	.6	.6	.9	.1	.7	.2	.6	.1
2nd	2365	.8	.4	1.1	.3	1.2	.6	.6	.1
3rd	2184	.6	.5	1.4	.4	1.2	.7	.7	.2
High	2305	.4	.4	1.2	.2	1.8	1.3	.8	.1
SES Quartile									
Low	4218	.4	.4	.8	.2	.7	.4	.5	0.0
2nd	2523	.7	.4	1.0	.2	1.1	.6	.6	.1
3rd	2301	.6	.5	1.1	.3	1.3	.8	.8	.2
High	2088	.4	.4	1.3	.3	1.6	1.5	1.0	.1

Table A4-2—Standard errors for percent of HS&B seniors and NLS'72 senior who attended specified types of school, by racial/ethnic characteristics and gender

	Race/Ethnicity			Gender						
						Males			Females		
1980 Activity	Hispanic	Black	White	Males	Females	Hispanic	black	white	Hispanic	black	white
Type of School											
(n)	2749	2724	5180	5213	6014	1288	1189	2443	1461	1535	2737
4-Year	1.5	1.4	1.0	1.0	1.1	1.6	2.3	1.2	1.9	2.1	1.3
2-Year	1.5	1.4	.6	.9	.8	2.0	1.8	.9	2.3	1.4	1.1
Vo-tech	.9	.6	.4	.4	.4	.8	1.0	.5	1.5	.8	.5
Other	.1	.1	.2	.2	.2	.1	.2	.2	.1	.2	.2
No School	1.5	1.5	1.0	1.3	1.0	1.8	2.6	1.5	2.5	2.2	1.3
1981 Activity											
(n)	2749	2724	5180	5213	6014	1288	1189	2443	1461	1535	2737
4-Year	1.3	1.6	1.1	1.0	1.1	2.1	2.7	1.2	1.3	1.7	1.3
2-Year	1.3	1.1	.6	.7	.7	2.2	1.4	.7	1.7	1.3	.9
Vo-Tech	.8	.6	.4	.5	.5	1.3	.9	.6	.7	1.2	.6
Other	.1	.1	.1	.2	.2	.2	.2	.2	.2	.2	.2
No School	1.1	1.6	1.0	1.2	2.7	.9	2.8	1.3	2.1	2.1	1.2

Table A4-3--Standard errors for the percent of students enrolled in specified types of school in 1980 who were enrolled in specified types of school in 1981

	October 1980				
October 1981	4-Year	2-Year	Vo-tech	Other	None
(n)	3542	1773	610	88	4955
4-Year	.8	.8	.7	6.5	.4
2-Year	.5	1.3	.9	4.2	.5
Vo-Tech	.3	.9	2.9	2.4	.5
Other	.1	.1	--	8.8	.1
None	.6	1.2	2.8	6.9	.8

Table A4-4--Standard errors for the percent of HS&B seniors attending specified types of postsecondary schools, either full- or part-time, by selected background characteristics

Characteristics	Vocational		Junior College		College/University		Multiple	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
(n)	602	162	1395	459	3053	149	752	46
Males								
Hispanic	.8	.2	2.3	1.3	1.6	1.0	.7	.1
Black	1.3	.2	1.6	.9	2.0	.3	.5	.2
White	.6	.3	.8	.3	1.2	.2	.6	.2
Females								
Hispanic	1.4	.6	1.9	.7	1.5	.2	1.1	.2
Black	1.3	.6	1.2	.5	1.7	.2	1.3	.1
White	.6	.3	.9	.5	1.3	.3	.6	.1
Test Quartile								
Low	.3	.2	.5	.2	.9	.2	.4	.1
2nd	.7	.4	.8	.6	.7	.2	.4	.3
3rd	.8	.4	.8	.7	1.4	.3	.6	.2
High	.8	.3	1.2	.6	1.4	.4	.7	.3
All								
SES Quartile								
Low	.3	.2	1.0	.5	1.6	.4	.8	.2
2nd	.5	.3	.6	.4	.8	.3	.5	0.0
3rd	.8	.4	1.0	.4	1.2	.4	.7	.2
High	.6	.5	1.0	.6	1.3	.2	.8	.2
All								
Family Income	Not Available							
0-6,999								
7,000-11,999								
12,000-15,999								
16,000-19,999								
20,000-24,999								
25,000-37,999								
38,000 and up								

Table A4-7—Standard errors for the percent of HS&B seniors' plans and activities during the first 2 years after graduation, by SES quartile

Plans and Activities	(n)	Quartile Low	2nd	3rd	High	All
(n)		4218	2523	2301	2088	11130
Vocational Courses (Vo-tech)						
Planned and did	367	.4	.5	.4	.5	.2
Planned and did not	1296	.7	1.1	.7	.5	.4
Did but not planned	803	.6	.7	.7	.5	.3
Academic Courses (JC)						
Planned and did	977	.5	.8	.9	1.1	.4
Planned but did not	763	.5	.7	.8	.6	.3
Did but not planned	4607	.9	1.6	1.5	1.4	1.0
Academic Courses (College)						
Planned and did	3886	.9	1.4	1.3	1.5	.7
Planned but did not	1329	.5	.5	.6	.8	.3
Did but not planned	1698	.8	1.0	1.1	1.3	.6
Apprenticeship						
Planned and did	40	.1	.2	.2	.2	.1
Planned and did not	1067	.9	.9	1.0	.8	.4
Did but not planned	133	.4	.2	.3	.3	.2
Vocational courses (JC)						
Planned and did	193	.3	.4	.5	.4	.2
Planned and did not	991	.5	.8	.8	.7	.3
Did but not planned	977	.7	.9	.7	.8	.4

Table A4-9--Standard errors for the percent of HS&B seniors' whose educational activities in the first two years after graduation did or did not agree with their plans, by test quartile

Plans and Activities	(n)	Quartile Low	2nd	3rd	High	All
(n)		3405	2365	2184	2305	10259
Vocational Courses (Vo-Tech)						
Planned and did	367	.5	.5	.5	.3	.2
Planned but did not	1296	1.0	1.0	.8	.6	.4
Did but not planned	803	.5	.9	.7	.7	.3
Academic Courses (JC)						
Planned and did	977	.5	.8	1.0	1.1	.4
Planned but did not	763	.9	.6	.8	.6	.3
Did but not planned	4607	.9	1.5	1.6	1.3	1.0
Academic Courses (College)						
Planned and did	3886	.9	1.2	1.4	1.4	.7
Planned but did not	1329	.6	.9	.9	.7	.3
Did but not planned	1698	.7	1.2	1.3	1.2	.6
Apprenticeship						
Planned and did	40	.2	.3	.2	0.0	.1
Planned and did not	1067	.6	.8	1.2	.7	.4
Did but not planned	133	.2	.4	.3	.2	.2
Vocational Courses (JC)						
Planned and did	193	.3	.5	.4	.3	.2
Planned and did not	991	.6	1.1	.8	.8	.3
Did but not planned	977	.8	1.1	.7	.7	.4

Table A4-10—Standard errors for the percent of HS&B seniors and NLS-72 students with specified planned activities who undertook the activity

1980 Activity	Planned Activity: 4-Year	2-Year: academic	2-Year: vo-tech	Vo-Tech	Work: full-time	Work: part-time	On-The-Job Training	Military	Homemaker	Other
(n)	4378	1024	652	711	2645	228	200	356	90	268
4-Year	.7	1.7	1.8	1.0	.6	1.7	3.2	1.5	2.3	3.5
2-Year	.6	2.2	3.0	1.7	.9	3.7	3.3	1.7	4.6	2.5
Vo-Tech	.2	.9	1.9	2.5	.5	3.1	2.3	.9	2.4	1.6
Other Study	.2	.6	.7	.4	.2	1.1	.1	.9	—	.9
No School	.5	2.1	2.5	2.5	1.0	3.6	4.1	2.7	5.0	4.0

Table A4-11—Standard errors for the comparison in percentages for HS&B and NLS '72 seniors of plans and actual attendance by type of institutions, race, and gender

1980 Activity		Race/Ethnicity			Gender							
		Hispanic	Black	White	Males	Females	Males			Females		
							Hispanic	black	white	Hispanic	black	white
(n)		2749	2724	5180	5213	6014	1288	1189	2443	1461	1535	2737
Planned:	4-Year	2.7	1.2	.9	1.2	1.0	3.8	2.7	1.4	4.1	1.7	1.0
Attended:	4-Year	3.1	1.6	.9	1.4	1.3	5.0	3.1	1.6	3.8	2.2	1.3
	2-Year	2.2	1.3	.6	.9	.7	4.7	1.6	.8	2.3	1.3	.8
	Vo-Tech	1.1	.4	.2	.2	.2	2.2	1.1	.3	.8	.4	.3
Planned:	2-Year	3.2	3.2	2.2	2.6	2.0	5.4	5.9	3.2	4.0	4.5	2.6
Attended:	4-Year	2.1	2.5	1.0	2.0	1.2	1.8	3.8	2.4	3.1	3.0	1.5
	2-Year	3.6	3.6	2.3	3.2	2.5	6.0	4.5	3.9	4.7	4.5	3.4
	Vo-Tech	1.4	1.3	.9	1.1	1.0	.8	2.5	1.4	2.2	2.3	1.2
Planned:	Vo-Tech	4.7	3.2	3.4	4.8	3.1	4.9	7.3	6.2	9.1	4.2	3.7
Attended:	4-Year	1.4	2.3	1.4	1.8	1.2	2.7	4.2	2.3	1.2	2.9	1.6
	2-Year	3.8	3.1	2.1	2.0	2.5	2.3	5.0	2.4	7.9	3.5	3.4
	Vo-Tech	4.5	3.0	3.4	4.4	3.6	4.8	4.5	5.8	6.8	4.4	3.9

Table A4-12--Standard errors for the percent of HS&B seniors whose educational attendance is consistent with their educational expectations, by gender and race/ethnicity

Educational Expectations	(n)	Males			Females		
		Hispanic	Black	White	Hispanic	Black	White
Trade School							
LT 2 years	773	6.5	6.7	4.6	5.9	5.6	2.8
Two years or more	1228	6.1	3.4	3.7	6.0	4.0	4.5
College							
LT 2 years	307	6.6	9.8	10.3	11.5	8.1	5.3
Two years or more	1338	5.9	4.8	3.3	6.4	4.7	2.7
Bachelor's Degree	2734	4.1	3.8	2.1	3.9	2.9	1.9
Master's Degree	1301	9.2	6.1	4.1	6.0	3.4	2.9
Doctorate	1086	6.7	6.2	3.3	8.2	4.3	3.8

Table A4-13--Standard errors for the percent of HS&B seniors whose educational attendance is consistent with their educational expectations, by test quartile

Educational Expectations	(n)	Quartile Low	2nd	3rd	High
Trade School					
LT 2 years	718	4.1	3.6	5.5	11.4
Two years or more	1128	4.1	3.3	6.1	6.1
College					
LT 2 years	290	5.9	6.0	13.9	12.2
Two years or more	1252	4.2	3.2	3.2	5.2
Bachelor's Degree	2619	3.8	2.6	2.5	2.1
Master's Degree	1290	5.2	5.1	4.0	3.1
Doctorate	1072	6.8	5.1	4.4	2.5

Table A4-14--Standard errors for the percent of HS&B seniors whose educational attendance is consistent with their educational expectations, by family income

Educational Expectations	(n)	Family Income 0-6,999	7,000-11,999	12,000-15,999	16,000-19,999	20,000-24,999	25,000-37,999	38,000+
Trade School								
LT 2 years	754	6.2	6.2	6.4	4.9	6.4	7.0	10.3
Two years or more	1174	5.7	5.6	5.6	4.4	5.8	4.8	8.4
College								
LT 2 years	297	10.9	10.8	10.1	12.0	12.4	10.4	11.3
Two years or more	1301	7.0	6.5	4.8	5.3	5.9	5.5	5.3
Bachelor's Degree	2713	5.0	4.8	4.3	3.2	2.3	2.3	2.9
Master's Degree	1318	7.5	4.7	6.6	5.3	5.4	4.5	3.5
Doctorate	1116	5.4	5.6	7.0	5.3	5.3	4.4	4.9

Table A5-1--Standard errors for the percent of HS&B seniors using specified sources of financing in either 1980 or 1981, by selected background characteristics

		Sources of Financing			
	(n)	Grant	Loan	Relatives	Own
Males					
Hispanic	723	3.3	2.6	2.4	3.3
Black	666	3.4	3.0	3.2	3.1
White	1611	1.5	1.1	1.5	1.8
Females					
Hispanic	874	3.0	2.9	3.1	4.0
Black	987	2.4	2.0	1.8	2.0
White	1938	1.6	1.4	1.5	1.3
Aptitude					
Low	1403	1.8	2.1	1.7	2.4
2nd	1409	1.8	1.5	2.0	2.0
3rd	1619	1.8	1.5	1.6	1.7
High	1911	1.6	1.4	1.2	1.3
Family Income					
0-6,999	561	3.1	4.0	2.7	2.9
7,000-11,999	865	2.6	2.7	2.0	2.9
12,000-15,999	946	2.0	2.3	3.0	2.7
16,000-19,999	1011	1.6	2.1	2.2	1.4
20,000-24,999	1009	2.2	2.2	2.5	2.5
25,000-37,999	1135	2.1	1.9	1.9	1.6
38,000 and up	1024	2.2	2.0	2.2	2.8

Table A5-2--Standard errors for the percent of HS&B seniors whose proportion of total financing over 2 years is accounted for by the specified source of financing, by selected background characteristics

		Source of Financing			
		Grant		Loans	
	(n)	<5%	>95%	<5%	>95%
Males					
Hispanic	563	4.2	2.4	3.6	.8
Black	529	3.4	4.2	3.7	1.4
White	1356	1.7	1.1	1.4	.8
Females					
Hispanic	695	3.5	2.6	3.2	.8
Black	790	2.2	1.6	2.3	1.5
White	1668	1.7	.7	1.6	.6
Aptitude					
Low	977	2.3	1.4	3.0	1.4
2nd	1141	2.1	.9	2.0	.7
3rd	1388	2.1	1.0	1.8	.8
High	1721	1.7	.5	1.5	1.0
Family Income					
0-6,999	457	2.9	3.7	4.3	1.2
7,000-11,999	697	2.3	2.1	3.4	1.0
12,000-15,999	796	2.1	1.7	2.8	.9
16,000-19,999	840	1.8	1.0	2.6	1.1
20,000-24,999	860	2.4	1.2	2.3	1.0
25,000-37,999	944	2.5	.8	2.2	.9
38,000 and up	823	2.4	1.0	2.2	1.3

Table A5-3--Standard errors for the percent of HS&B seniors attending a postsecondary school and paying tuition of $2,000 or more over 2 years who use the specified source of financing in either year, by type of school attended

		Source of Financing			
	(n)	Aid	Loan	Relatives	Own
Vocational					
Public					
full-time	400	4.5	3.6	4.1	3.7
part-time	117	3.8	.6	8.1	5.4
Private					
full-time	202	4.6	4.8	4.3	5.8
part-time	45	6.0	15.0	11.0	12.0
2-Year					
Public					
full-time	1310	1.7	1.2	2.1	2.0
part-time	453	1.9	.7	2.4	3.8
Private					
full-time	85	7.2	7.0	7.0	6.7
part-time	6	--	--	--	--
4-year					
Public					
full-time	2138	1.8	1.8	1.5	1.7
part-time	128	4.2	2.7	5.6	7.5
Private					
full-time	915	3.4	2.1	2.8	3.5
part-time	21	--	--	--	--
Multiple Institutions					
Public					
full-time	726	3.0	3.2	2.6	2.4
part-time	43	6.0	8.0	10.0	12.0
Private		--	--	--	--
full-time	26	--	--	--	--
part-time	3				

Table A5-4—Standard errors for the percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by race/ethnicity and gender

Grants, Scholarships (% of those in race/gender category receiving aid who used specific source)	Male						Female					
	Hispanic		Black		White		Hispanic		Black		White	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	5.0	5.1	3.5	4.6	3.2	3.2	4.4	4.2	2.3	2.8	1.9	1.2
SEOG	3.7	2.6	3.2	3.7	1.9	2.0	2.4	2.3	1.1	1.3	3.5	4.1
ROTC	—	.2	.4	.5	.5	.9	3.3	4.1	.2	.2	.2	.4
Social Security	3.1	3.5	2.5	3.2	1.3	1.5	2.5	2.6	1.6	1.8	2.8	2.4
Nursing	.4	3.3	—	.3	.1	.1	.3	.6	.8	.6	.1	.2
V.A. Survivors	1.2	1.1	1.5	1.7	.6	.9	2.4	3.2	.8	1.0	1.6	1.8
VEAP	.4	.9	—	—	.3	.3	.4	.2	—	.3	.4	.4
State Scholarship	2.7	2.5	2.4	4.1	2.0	1.7	2.4	3.2	1.3	1.8	1.6	1.8
College/University	4.2	4.2	3.1	3.2	2.2	2.7	2.8	2.4	1.9	2.2	2.3	1.2
Private Organizations	1.8	1.6	2.8	1.2	2.4	2.1	3.9	4.0	2.3	1.1	2.3	2.1
Voc. Rehab.	4.9	.8	.6	.9	.6	.5	2.1	2.6	.2	.5	.2	.3
Unknown Source	1.2	5.1	.8	3.2	1.4	1.5	.8	1.1	.8	.9	1.9	.9
Other	4.8	4.8	4.0	5.8	2.1	2.5	2.5	2.9	1.7	2.2	2.5	2.7
Number That Received Some Form of Grant	322	274	383	304	604	501	445	349	608	533	812	588
(None) Those Answering Where Grant Was Received	(3.7) 698		(3.7) 652		(1.4) 1591		(3.0) 875		(1.6) 983		(2.6) 1934	
Loans (% of those in race/gender category using loans who used specific source)												
NDSL	8.6	8.2	5.6	4.3	2.2	2.1	5.9	5.6	2.8	3.3	5.1	5.8
GSL	7.8	7.2	5.8	7.1	2.8	3.2	7.2	6.7	2.6	3.1	5.0	5.1
Nursing	.5	1.1	—	—	.1	—	1.1	—	1.0	.6	—	2.2
State	2.1	2.5	1.9	2.2	1.8	1.6	2.8	3.0	1.4	1.6	1.5	1.4
College/University	1.5	2.5	3.0	1.9	1.6	1.2	1.6	4.2	1.0	1.6	1.9	3.5
Regular Bank	1.0	2.9	3.1	6.4	1.6	2.1	5.8	5.1	1.4	1.6	5.2	2.1
Parents, Relatives	2.9	6.7	2.6	2.9	1.7	1.9	2.3	3.2	1.6	1.7	1.8	2.1
Unknown Source	2.3	1.1	1.0	2.0	.4	.6	1.9	2.3	.8	1.0	3.7	1.5
Other	6.5	6.7	2.4	2.2	.9	.9	3.9	6.0	1.2	.9	1.7	1.5
Number That Received Some Form of Loan	124	118	157	134	465	465	157	125	248	250	578	529
(None) Those Answering Where Loan Was Received	(2.9) 696		(3.0) 651		(1.1) 1574		(3.1) 863		(1.4) 959		(2.1) 1918	

Table A5-4 Continued

Family or Friends (% of those in race/gender category receiving aid from family or friends who used specific source)	Male						Female					
	Hispanic		Black		White		Hispanic		Black		White	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	2.3	1.8	2.2	3.3	.8	.9	1.4	2.3	1.3	2.3	.8	1.4
Spouse	.2	—	—	1.0	.2	.4	.6	.8	.4	.9	.2	.5
Other	2.5	2.2	3.5	3.4	1.1	1.3	2.0	3.9	3.3	2.9	1.1	1.1
Number That Received Some Form of Aid From Family or Friends	186	184	192	164	636	596	265	225	286	267	879	792
(None)	(3.0)		(3.5)		(1.5)		(2.9)		(2.5)		(1.6)	
Those Answering Where Aid From Family or Friends Was Received	654		593		1518		814		916		1870	
Own Resources (% of those in race/gender category using own resources who used specific source)												
Savings from Before	5.6	4.7	4.7	4.5	2.0	2.2	5.5	4.4	4.1	4.3	1.7	1.7
Earnings from Before	5.6	5.9	4.8	5.2	2.1	2.1	5.5	4.8	3.7	4.1	2.0	1.6
College Work Study	2.8	5.0	3.1	3.3	1.0	1.1	1.9	2.1	4.8	4.7	1.4	1.8
Assistantship	.8	.2	.8	.6	.3	.3	.4	1.0	.4	.5	.3	.4
Earnings While Enrolled	4.3	3.3	2.9	4.2	1.9	2.3	6.0	5.0	5.0	2.7	2.0	1.9
Number That Used Own Resources	333	304	235	337	916	867	321	321	348	315	1058	974
(None)	(3.8)		(3.6)		(1.8)		(3.0)		(2.2)		(1.4)	
Those Answering Where Own Resources Were Used	636		586		1498		809		905		1840	

Table A5-5—Standard errors for the percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by family income category

Grants, Scholarships (% of those in family income category receiving aid who use specific source)	Income Category													
	0-6,999		7,000-11,999		12,000-15,999		16,000-19,999		20,000-24,999		25,000-37,999		38,000+	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	3.5	3.4	2.0	2.4	2.9	3.8	2.7	3.6	2.9	3.4	3.2	3.6	3.3	5.1
SEOG	3.5	2.1	2.6	2.7	2.2	2.6	1.6	2.8	2.5	2.6	2.1	2.2	2.4	2.3
ROTC	0.0	1.8	.1	.2	0.0	.2	.2	.2	.6	.6	.9	1.1	1.8	2.0
Social Security	4.0	3.7	3.1	3.2	2.8	3.1	2.0	2.6	1.6	2.4	1.7	2.2	2.0	2.1
Nursing	1.4	.3	—	.2	.7	.9	.8	.2	.8	.7	.9	.8	0.0	0.0
V.A. Survivors	1.4	1.9	1.9	1.8	1.5	2.0	1.1	1.4	.7	1.2	.8	.9	.5	1.1
VFAP	—	—	.1	.2	.7	1.0	.2	.3	.1	.7	.1	.1	—	—
State Scholarship	3.7	4.2	2.7	3.4	2.5	2.9	3.0	2.4	2.7	3.1	2.6	2.7	3.4	3.5
College/University	2.6	2.1	2.7	2.6	2.7	2.7	1.9	3.2	3.1	3.2	3.6	3.9	3.5	4.1
Private Organizations	2.3	1.7	2.9	1.7	2.2	1.5	.8	1.8	3.7	2.8	3.4	3.3	4.8	3.0
Voc. Rehab.	.3	.3	.7	1.0	.3	.3	.8	1.3	.7	.7	.9	.2	—	—
Unknown Source	2.3	1.9	1.4	1.7	1.0	.6	.8	.4	1.2	1.9	1.3	1.6	2.3	2.6
Other	3.4	3.1	2.2	2.8	2.9	2.9	3.2	3.8	2.5	3.1	4.0	3.9	4.8	4.9
Number That Received Some Form of Grant	380	319	549	449	556	442	505	404	452	354	398	314	237	209
(None) Those Answering Where Grant Was Received	(2.8) 564		(2.3) 856		(2.1) 935		(1.6) 1001		(2.1) 1012		(2.2) 1133		(2.3) 994	
Loans (% of those in family income category using loans who used specific source)														
NDSL	8.4	6.6	5.4	5.5	4.2	4.6	3.9	4.0	3.4	3.3	3.0	3.7	3.2	2.7
GSL	5.3	6.4	4.7	7.6	4.6	5.0	4.6	4.1	3.3	4.6	4.0	3.0	5.1	4.4
Nursing	.7	—	.5	—	0.0	.4	1.4	.2	1.4	1.5	.3	.8	—	.1
State	1.8	1.3	.9	3.3	2.0	1.9	3.2	2.9	2.3	2.5	2.2	2.0	3.1	2.9
College/University	1.7	1.7	3.0	3.2	2.1	3.2	1.8	1.7	1.7	1.6	1.4	1.3	1.4	1.0
Regular Bank	2.6	4.2	3.2	4.7	3.6	2.4	1.7	2.4	1.8	1.8	2.4	2.1	2.2	1.9
Parents, Relatives	4.6	2.0	2.6	3.2	3.3	3.8	1.9	2.4	1.5	2.0	2.8	3.1	1.3	1.5
Unknown Source	1.5	1.4	.5	3.2	.6	1.5	.8	1.0	.8	.3	1.3	1.3	1.6	1.6
Other	4.3	1.3	2.4	1.4	2.4	2.3	1.6	2.0	1.4	1.7	1.7	1.6	.4	.5
Number That Received Some Form of Loan	114	117	187	160	228	213	275	248	274	257	301	295	276	272
(None) Those Answering Where Loan Was Received	(4.0) 559		(2.8) 844		(2.5) 920		(2.2) 984		(2.0) 998		(1.9) 1119		(2.0) 1001	

Table A5-5 Continued

Family or Friends (% of those in family income category receiving aid from family or friends who used specific source)	Income Category													
	0-6,999		7,000-11,999		12,000-15,999		16,000-19,999		20,000-24,999		25,000-37,999		38,000+	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	3.5	5.9	3.6	3.5	2.4	3.3	1.4	2.0	1.3	1.8	1.1	1.4	.9	1.1
Spouse	—	4.8	.3	.4	—	2.3	.7	.7	.5	.1	.1	.7	.1	—
Other	4.8	5.3	3.3	3.8	3.2	4.0	2.6	2.6	2.0	2.6	1.3	1.4	1.2	1.0
Number That Received Some Form of Aid From Family or Friends	113	103	219	216	282	243	345	307	414	385	494	443	526	495
(None) Those Answering Where Aid From Family or Friends Was Received	(3.3) 532		(2.4) 793		(2.8) 885		(2.3) 947		(2.4) 969		(2.0) 1076		(2.2) 959	
Own Resources (% of those in family income category using own resources who used specific source)														
Savings from Before	5.0	6.0	3.4	4.8	3.6	3.3	2.6	2.2	3.0	2.7	2.3	3.0	3.5	4.2
Earnings from Before	4.6	6.4	3.4	3.0	4.2	4.7	3.0	2.9	2.5	2.6	2.8	3.3	2.8	3.2
College Work Study	3.8	3.4	3.9	3.2	2.2	2.3	2.0	2.2	2.2	2.5	2.0	1.4	1.0	2.0
Assistantship	2.2	2.3	1.0	1.1	.2	.3	.5	.5	.6	.8	0.0	.1	.2	.5
Earnings While Enrolled	4.6	5.6	3.9	3.0	3.3	3.4	3.4	3.2	2.6	2.7	2.9	2.8	3.0	3.6
Number That Used Own Resources	207	185	362	346	459	400	513	476	515	493	584	564	482	458
(None) Those Answering Where Own Resources Were Used	(2.5) 518		(2.6) 778		(2.8) 873		(1.4) 929		(2.3) 955		(1.4) 1059		(2.7) 947	

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Table A5-6—Standard errors for the percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by test quartile

Grants, Scholarships (% of those in test quartile category receiving aid who used specific source)	Quartile: Low		2nd		3rd		High	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	3.0	3.7	3.1	3.7	3.0	3.1	2.0	2.2
SEOG	1.8	1.8	1.6	2.0	2.4	2.4	1.4	1.5
ROTC	—	.2	.1	.2	.4	.6	.5	.8
Social Security	2.3	2.7	2.1	2.8	1.7	2.0	1.4	1.6
Nursing	.1	.1	1.0	.7	.8	.9	.2	—
V.A. Survivors	1.3	1.8	.6	.7	.7	.9	.9	1.1
VEAP	—	.2	.2	.3	.4	.2	0.0	.5
State Scholarship	2.0	1.8	1.9	1.9	2.0	2.0	1.3	1.6
College/University	1.3	1.7	2.6	2.4	2.2	2.0	2.0	3.0
Private Organizations	.6	1.2	2.2	1.3	2.6	1.6	2.0	1.8
Voc. Rehab.	.3	.6	.9	.2	.6	.6	.4	.6
Unknown Source	.7	.7	1.8	1.7	1.0	1.0	.9	1.2
Other	2.0	2.2	2.8	2.9	2.9	2.7	2.0	1.9
Number That Received Some Form of Grant	604	501	641	522	717	578	995	796
(None)	(2.0)		(2.0)		(1.9)		(1.6)	
Those Answering Where Grant Was Received	1388		1393		1602		1900	
Loans (% of those in test quartile category using loans who used specific source)								
NDSL	4.7	4.7	3.0	3.1	3.0	3.2	2.5	2.3
GSL	4.6	5.8	2.7	4.6	2.4	3.6	2.7	2.6
Nursing	.4	2.1	1.0	1.0	1.1	.6	.5	.3
State	3.2	1.9	2.4	2.4	1.9	2.1	2.1	1.9
College/University	1.2	1.1	1.3	1.8	1.3	1.5	2.0	1.2
Regular Bank	3.4	3.2	2.2	2.3	1.6	1.9	1.5	1.5
Parents, Relatives	3.6	4.5	2.8	3.2	2.4	2.5	1.0	1.2
Unknown Source	3.0	3.0	1.5	2.2	.8	.3	.5	.8
Other	2.5	1.8	2.8	2.7	1.8	1.4	.6	.7
Number That Received Some Form of Loan	224	189	296	267	422	391	670	659
(None)	(2.4)		(1.6)		(1.6)		(1.4)	
Those Answering Where Loan Was Received	1353		1377		1584		1897	

Table A5-6 Continued

Family or Friends (% of those in test quartile category receiving aid from family or friends who used specific source)	Quartile: Low		2nd		3rd		High	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	1.7	2.9	1.5	1.7	.9	1.6	.8	.7
Spouse	.3	.5	.1	1.0	.4	.4	.2	.5
Other	1.5	1.9	1.2	2.1	1.1	1.5	1.0	1.5
Number That Received Some Form of Aid From Family or Friends	310	286	457	399	640	564	911	871
(None) Those Answering Where Aid From Family or Friends Was Received	(1.8) 1238		(2.0) 1338		(1.7) 1544		(1.3) 1832	
Own Resources (% of those in test quartile category using own resources who used specific source)								
Savings from Before	3.1	3.8	2.9	3.8	1.7	2.9	1.5	1.8
Earnings from Before	3.1	4.4	2.6	3.4	2.0	2.4	2.1	1.6
College Work Study	1.9	1.7	1.5	2.0	1.5	2.0	1.5	1.3
Assistantship	1.0	1.3	.2	.1	.1	.1	.3	.5
Earnings While Enrolled	2.9	3.3	2.4	2.5	2.3	2.5	1.9	1.7
Number That Used Own Resources	423	386	615	574	848	787	1151	1101
(None) Those Answering Where Own Resources Were Used	(2.4) 1211		(2.0) 1311		(1.8) 1522		(1.3) 1810	

Table A5-7—Standard errors for the percent of HS&B seniors who received specified types of financial aid in either of 2 years to attend a postsecondary school, by type of school preferred

	Vocational Public		Vocational Private		2-Year Public		4-Year Public		4-Year Private		Multiple Public	
Grants, Scholarships	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Pell	5.5	7.5	9.4	10.0	3.5	4.1	2.0	2.2	3.6	3.8	4.5	4.6
SEOG	3.2	3.8	8.4	12.5	2.0	1.7	1.2	1.5	3.1	2.7	2.1	2.3
ROTC	0.0	.8	0.0	0.0	0.0	0.0	.4	.7	.5	.5	1.6	1.9
Social Security	5.9	5.7	5.6	6.7	2.5	2.9	1.6	1.8	1.7	2.3	2.8	2.7
Nursing	.3	.8	3.8	5.2	.9	.1	.2	.1	.6	.5	1.6	1.1
V.A. Survivors	2.6	5.0	0.0	4.8	1.8	2.0	.7	.8	.8	.9	1.3	1.5
G.I. Bill	0.0	.8	0.0	0.0	0.0	.1	.2	.1	0.0	.5	.4	.4
State Scholarship	1.6	3.7	6.4	8.0	1.0	1.0	1.8	1.7	2.5	3.2	3.2	2.6
College/University'	.5	1.0	7.4	10.3	2.1	2.1	1.6	1.8	3.2	3.0	3.2	3.0
Private Organizations	3.1	2.5	6.0	.8	2.4	1.4	1.7	1.2	2.8	2.2	2.9	2.7
Voc. Rehab.	.9	1.5	.6	1.4	.1	0.0	.4	.5	.1	.1	1.3	1.0
Unknown Source	2.9	6.0	.8	.9	1.7	1.6	.9	1.3	1.8	2.0	.2.0	2.4
Other	4.5	5.1	5.2	11.2	2.2	2.9	1.7	2.2	2.9	3.1	3.0	3.8
(None)	(3.9)		(4.8)		(1.8)		(1.8)		(3.6)		(2.8)	
Loans												
NDSL	4.7	4.1	8.0	4.8	3.2	3.7	2.3	1.8	3.7	3.9	4.2	5.0
GSL	8.1	8.8	6.1	10.4	7.0	5.4	3.0	3.0	4.6	4.4	6.2	5.2
Nursing	1.0	0.0	0.0	6.0	2.6	1.5	.3	.1	1.0	.5	2.0	1.1
State	1.8	7.0	5.4	5.4	2.6	2.6	2.2	1.9	1.9	1.8	3.4	3.2
College/University	2.9	.6	2.6	5.1	1.6	1.6	1.0	1.4	2.0	1.6	1.5	2.0
Regular Bank	4.1	7.3	8.5	11.5	2.7	4.0	1.4	1.7	1.6	1.7	2.6	4.0
Parents, Relatives	6.9	5.8	4.4	5.3	4.4	3.8	1.7	1.6	1.8	2.1	3.1	3.8
Unknown Source	3.8	4.4	4.0	6.5	5.1	1.6	.4	.5	.1	.1	.2	1.9
Other	7.3	4.8	3.6	0.0	1.6	.8	.4	.9	1.2	1.4	1.5	1.8
(None)	(2.8)		(3.9)		(0.9)		(1.6)		(2.2)		(3.1)	

Table A5-7 Continued

Friends Or Relatives	Vocational Public		Vocational Private		2-Year Public		4-Year Public		4-Year Private		Multiple Public	
	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82	80-81	81-82
Parents	3.7	3.8	6.3	10.8	1.6	1.9	.7	1.1	1.2	1.5	.4	2.7
Spouse	0.0	.4	.7	0.0	0.0	.6	.1	.5	0.0	.5	.8	.4
Other	2.5	4.1	6.9	1.3	1.5	2.3	.9	1.2	2.0	2.0	2.2	2.6
(None)	(3.3)		(4.0)		(1.9)		(1.4)		(2.5)		(2.2)	
Own Resources												
Savings from Before	4.7	5.3	5.9	7.2	2.8	3.0	1.8	2.3	2.6	2.4	3.3	3.5
Earnings from Before	5.5	5.1	7.8	6.2	2.9	3.0	1.7	1.9	3.7	2.5	4.2	4.3
College Work Study	3.0	3.2	.9	2.6	1.4	1.5	1.7	1.5	2.5	2.8	2.6	2.4
Assistantship	0.0	1.8	.4	0.0	.4	.4	.4	.5	.5	.5	0.0	.6
Other Earnings	5.6	4.1	6.4	7.7	3.0	2.8	2.4	2.2	2.5	3.0	3.6	3.9
(None)	(2.7)		(4.6)		(1.5)		(1.5)		(4.1)		(2.1)	
(n)	(517)		(247)		(1763)		(2266)		(936)		(769)	